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ABSTRACT

This study examines the relationship of organizational variables to teacher motivation. It seeks to determine what differences, if any, exist between the organizational structures of multiunit (MUS) and non-multiunit (NMUS) individually guided education (IGE) elementary schools. The unit of analysis consists of MUS and NMUS elementary schools in the State of Wisconsin that employed ten or more staff members during 1971-72. Organizational structure was defined in terms of Hage's axiomatic theory of organizations. School means of complexity, centralization, formalization, and stratification were used, along with school size, to describe the organizational structure of the schools. Teacher motivation was defined in terms of the organization's reward systems as measured by expectancy theory as delineated by Vroom and Porter and Lawler. Major findings indicate no significant differences between MUSs and NMUSs in school size, complexity, and formalization, but MUSs were less centralized, less stratified, and had more highly motivated teachers than NMUSs. Results of this study suggest that administrators interested in developing higher levels of teacher motivation should make every effort to involve teachers in the decisionmaking process and that they should attempt to distribute rewards to teachers fairly and justly. (Author/DN)

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Technical Report No. **322**

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Report from the Project on Organization for Instruction and Administrative Arrangements

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

Wisconsin Research and Development
CENTER FOR COGNITIVE LEARNING

THE UNIVERSITY OF WISCONSIN
Madison, Wisconsin

National Institute of Education

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Technical Report No. 322

THE RELATIONSHIP OF ORGANIZATIONAL STRUCTURE TO TEACHER MOTIVATION IN MULTIUNIT AND NON-MULTIUNIT ELEMENTARY SCHOOLS

Report from the Project on Organization for Instruction and Administrative Arrangements

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STATEMENT OF FOCUS

Individually Guided Education (IGE) is a new comprehensive system of elementary education. The following components of the IGE system are in varying stages of development and implementation: a new organization for instruction and related administrative arrangements; a model of instructional programing for the individual student; and curriculum components in prereading, reading, mathematics, motivation, and environmental education. The development of other curriculum components, of a system for managing instruction by computer, and of instructional strategies is needed to complete the system. Continuing programmatic research is required to provide a sound knowledge base for the components under development and for improved second generation components. Finally, systematic implementation is essential so that the products will function properly in the IGE schools.

The Center plans and carries out the research, development, and implementation components of its IGE program in this sequence: (1) identify the needs and delimit the component problem area; (2) assess the possible constraints--financial resources and availability of staff; (3) formulate general plans and specific procedures for solving the problems; (4) secure and allocate human and material resources to carry out the plans; (5) provide for effective communication among personnel and efficient management of activities and resources; and (6) evaluate the effectiveness of each activity and its contribution to the total program and correct any difficulties through feedback mechanisms and appropriate management techniques.

A self-renewing system of elementary education is projected in each participating elementary school, i.e., one which is less dependent on external sources for direction and is more responsive to the needs of the children attending each particular school. In the IGE schools, Center-developed and other curriculum products compatible with the Center's instructional programing model will lead to higher morale and job satisfaction among educational personnel. Each developmental product makes its unique contribution to IGE as it is implemented in the schools. The various research components add to the knowledge of Center practitioners, developers, and theorists.

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ABSTRACT

This study was designed to examine the relationship of organizational variables to teacher motivation to perform. It also sought to determine what differences, if any, existed between the organizational structures of multiunit (MUS) and non-multiunit (NMUS) IGE elementary schools.

The unit of analysis consisted of MUS and NMUS elementary schools in the State of Wisconsin which employed ten or more staff members during 1971-1972. The population consisted of schools which had implemented the multiunit elementary school concept (MUS) and those that had not implemented the concept (NMUS). A random sample of 40 schools was selected from each subpopulation and a total of 34 MUSs and 38 NMUSs participated in the study. A random sample of fifteen teachers was selected from each school to provide the data.

Organizational structure was defined in terms of Hage's axiomatic theory of organizations. School means of complexity, centralization, formalization, and stratification, along with school size, were used to describe the organizational structure of the schools. Teacher motivation was defined in terms of the organization's reward system measured by expectancy theory as delineated by Vroom and Porter and Lawler. Expectancy theory states that motivation or effort to perform is a multiplicative function of the probability

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of receiving a particular reward and the importance of the reward to the individual.

Sixteen hypotheses were formulated to answer the following general questions:

1. Is the organizational structure of the multiunit elementary school (MUS) significantly different from that of the non-multiunit elementary school (NMUS)?
2. Is the level of teacher motivation in the MUS significantly different from that of the NMUS?
3. Is there any significant relationship between the organizational variables of school size, complexity, centralization, formalization, and stratification and a teacher's motivation to perform?

The major findings of the study were as follows:

1. There were no significant differences between MUSs and NMUSs in school size, complexity, and formalization.
2. MUSs were less centralized, less stratified, and had more highly motivated teachers than NMUSs.
3. School size was a significant predictor of teacher motivation in both MUSs and NMUSs.
4. Complexity was a significant predictor of teacher motivation in NMUSs but not in MUSs.
5. Centralization was a significant predictor of teacher motivation in both MUSs and NMUSs.

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6. Formalization was not a significant predictor of teacher motivation in either the MUS or the NMUS.

7. Stratification was a significant predictor of teacher motivation in both MUSs and NMUSs.

Based on the results of this study, it is suggested that administrators interested in developing higher levels of teacher motivation make every effort to involve teachers in the decision-making process and that they attempt to distribute rewards to teachers fairly and justly. Further research also should be conducted concerning the relationship of organizational structure variables to motivation and role performance.

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CHAPTER I

INTRODUCTION

One of the primary concerns in education today is the reform and improvement of curriculum and instruction. What is being taught, how it is being taught, and the conditions under which it is being taught have become major areas of investigation for parents, students, and professional educators.

The traditional elementary school environment has imposed several limitations on the design and implementation of instructional programs. First, time is not normally available during the regular school day for staff to engage in building-wide instructional improvement efforts. A second limitation is that the teaching staff, because of similar work loads, is unable to carry out expanding responsibilities which take into account individual differences in teacher interests, experience, and capabilities. Third, few arrangements have been designed to enable the principal and teachers of a building to plan, implement, and evaluate an educational program which simultaneously considers characteristics of the neighborhood and the requirements of the state and local school systems.[1]

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[1] Herbert J. Klausmeier, et al., INDIVIDUALLY GUIDED EDUCATION AND THE MULTIUNIT ELEMENTARY SCHOOL (Madison, Wisconsin: Wisconsin Research and Development Center for Cognitive Learning, University of Wisconsin, n.d.), p. 3.

Because many elementary school educators have been sincerely interested in developing an excellent instructional program for each child, administrators and teachers from the school systems along with the staff of the University of Wisconsin Research and Development Center for Cognitive Learning attempted in the late 1960's to develop a more effective system of elementary education, starting with the organization for instruction and related administrative arrangements.[2] This attempt resulted in the multiunit elementary school which, because it was designed to overcome some of the limitations listed above, appeared to have an organizational structure considerably different from that of the traditional elementary school.

The purpose of this study was to determine the extent to which there are any significant differences in organizational structure between multiunit elementary schools and non-multiunit elementary schools and what relationships, if any, exist between elements of organizational structure and the desire for teachers to perform their organizational tasks.

In this chapter is presented a review of the related literature, the theoretical framework within which the study was

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[2] H. J. Klausmeier, R. Morrow, and J. E. Walter, INDIVIDUALLY GUIDED EDUCATION IN THE MULTIUNIT ELEMENTARY SCHOOL: GUIDELINES FOR IMPLEMENTATION (Madison, Wisconsin: Wisconsin Department of Public Instruction), 1968; and R. Morrow, J. Sorenson, and G. Glasrud, EVALUATION PROCEDURES FOR USE WITH THE MULTIUNIT ELEMENTARY SCHOOL PERSONNEL. (Madison, Wisconsin: Wisconsin Research and Development Center for Cognitive Learning, University of Wisconsin), 1969.

conducted, the hypotheses to be tested, and the significance and limitations of the study.

Related Literature

Traditional theory about organizations gave primary attention to the character of their internal structure.[3] Weber's[4] ideal type of bureaucracy described a situation in which authority of position and the authority of competence presumably coincide. Distinctive characteristics of an ideal-type bureaucratic structure included the following:

1. Organization tasks are distributed among the various positions as official duties. Implied is a clear-cut division of labor among positions which make possible a high degree of specialization.

2. The positions are organized into a hierarchical authority structure. Each official is responsible for his subordinates' decisions and actions as well as his own to the superior above him.

3. A formally established system of rules and regulations governs official decisions and actions. The regulations insure the uniformity of operations and, together with the authority structure, make possible the coordination of various activities. They also provide for continuity in operations regardless of change of personnel.

4. Officials are to assume an impersonal orientation in their contacts with clients and with their officials. The maintenance of social distance between hierarchical levels and between officials and their clients fosters formality, thus preventing the personal feelings of officials from distorting their rational judgment in carrying out their duties.

5. Employment by the organization constitutes a career for officials. Officials are appointed to positions, not elected, and thus are dependent on superiors in the organization rather than on a body of constituents.[5]

Another classical model of organizational structure is the public administration taxonomy given by Gulick.[6] Katz and Kahn examined Gulick's technical structure of the work process and concluded,

> ...the basic factors for departmentalization were purpose, process, person, and place. Jobs could be allocated to a department on the basis of their general purpose, their similarity in terms of process, the people who would carry out the assignments, or the place and clientele to be served. Gulick's conclusions were that the factor most appropriate for a given system was contingent upon circumstance and upon the results desired. A small organization might have to forgo purpose specialization in favor of process specialization .... No matter which factor is selected for primary organization, the other factors must be taken into account for secondary types of organizational structure.[7]

The Taylor[8] School of Scientific Management was concerned with the problems of rational analysis associated with the productive process of organizational structure and the appropriate

---

[3] Daniel Katz and Robert Kahn, THE SOCIAL PSYCHOLOGY OF ORGANIZATIONS (New York: John Wiley, 1966), p. 71.

[4] Max Weber, THE THEORY OF SOCIAL AND ECONOMIC ORGANIZATION (New York: Free Press, 1947).

[5] Howard L. Stone, "The Bureaucratic Structure," (unpublished paper, University of Wisconsin, Madison, Wisconsin, 1970).

[6] Luther Gulick and L. Urwick (eds.), PAPERS ON THE SCIENCE OF ADMINISTRATION (New York: Institute of Public Administration, Columbia University, 1937).

[7] Katz and Kahn, op. cit., p. 85.

[8] F. W. Taylor, THE PRINCIPALS OF SCIENTIFIC MANAGEMENT (New York: Harper & Row, 1923).

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forms of organizational coordination. Katz and Kahn summarized Taylor's work stating,

> Standards for every piece of behavior were set on the basis of time and motion studies. Performance control was provided by records completed at the end of every day and transmitted up the line for the scrutiny of the higher offices. The foreman had daily records on the work of his men; the division chief had records on the sections under his foremen, and so on to the organizational summit.[9]

The organization, though consisting of people, was viewed by Weber, Gulick, and Taylor as a machine, and they implied that one should construct an organization according to a specific blueprint to achieve a given purpose.[10]

Organizations as social systems[11] replaced the "machine" theories and introduced the individual into the organizational picture. As experts in the field began to accept the environment as an important factor in human behavior and the organization as a very important aspect of the environment for most people,[12] the concept of organizations as social systems grew. Within this view the task of the administrator, as head of the organization, was to arrange people into rational work groups while trying to avoid as

---

[9] Katz and Kahn, op. cit., p. 85.

[10] Ibid., p. 71.

[11] Jacobs W. Getzels, James M. Lipham, and Roald F. Campbell, EDUCATIONAL ADMINISTRATION AS A SOCIAL PROCESS (New York: Harper & Row, 1968).

[12] James G. March and Herbert A. Simon, ORGANIZATIONS (New York: John Wiley, 1958), p. 2.

many undesirable side effects as possible.[13]

Thompson[14] and Katz and Kahn[15] noted that negative side effects were difficult to avoid. Concerning such effects Argyris stated,

> An analysis of the basic properties of relatively mature human beings and formal organization leads to the conclusion that there is an inherent incongruency between the self-actualization of the two. This basic incongruency creates a situation of conflict, frustration, and failure is hypothesized to increase as the individual increases in degree of maturity and/or as he becomes increasingly subordinate along the chain of command and/or as his immediate work environment becomes increasingly specialized.[16]

The individual may adopt to conflicts, frustrations, and failures in ways such as leaving the organization or becoming apathetic,[17] both of which are detrimental to the organization. Argyris suggested that the organization, rather than the mature individual must change if such conflicts are to be resolved successfully. He said,

> Assuming that the healthy individuals are not to be changed, one way to reduce the "negative" (from management's point of view) informal behavior is to change the formal organizational structure so that the employee experiences more activity than passivity; greater relative

---

[13] Amitai Etzioni, MODERN ORGANIZATIONS (Englewood Cliffs, New Jersey: Prentice-Hall, 1964), p. 2.

[14] Victor A. Thompson, MODERN ORGANIZATION (New York: Alfred A. Knopf, 1961), pp. 81-113.

[15] Katz and Kahn, op. cit., pp. 15-16.

[16] Chris Argyris, PERSONALITY AND ORGANIZATION (New York: Harper & Row, 1957), p. 175.

[17] Ibid., pp. 175-176.

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> independence than dependence; uses more, rather than less, of his important, rather than skin-surfaced abilities; has a longer rather than a shorter time perspective; and finally, is in an equal if not higher position than his peers.[18]

McGregor[19] also suggested that the organization must adapt to the needs of the individual when he advocated the adoption of Theory Y--a theory of management based upon integration: the creation of conditions such that the organizational members can achieve their goals best by directing their efforts towards success of the organization--over Theory X--a theory of management based upon direction and control through the exercise of authority. He stated that the assumptions associated with Theory X are:

> (1) The average human being has an inherent dislike of work and will avoid it if he can.
>
> (2) Because of this human characteristic of dislike of work, most people must be coerced, controlled, directed, threatened with punishment to get them to put forth adequate effort for the achievement of organizational objectives.
>
> (3) The average human being prefers to be directed, wishes to avoid responsibility, has relatively little ambition, wants security above all.[20]

Theory X influences managerial strategy in a large sector of industry today. Much progress is being made and during recent years the human side of enterprise has become very important to management.

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[18] Ibid., p. 177.

[19] Douglas McGregor, THE HUMAN SIDE OF ENTERPRISE (New York: McGraw-Hill, 1960).

[20] Ibid., pp. 33-34.

In contrast to Theory X, McGregor presented the assumptions associated with Theory Y which are a product of the accumulation of knowledge about human behavior. This knowledge provides a basis for the development of new theory with respect to managing human resources. The assumptions of Theory Y are:

> (1) The expenditure of physical and mental effort in work is as natural as play or rest. The average human being does not inherently dislike work. Depending upon controllable conditions work may be a source of satisfaction (and will be voluntarily performed) or a source of punishment (and will be avoided if possible).
>
> (2) External control and threat of punishment are not the only means for bringing about effort toward organizational objectives. Man will exercise self direction and self control in the services of objectives to which he is committed.
>
> (3) Commitment to objectives is a function of the rewards associated with their achievement. The most significant of such rewards, the satisfaction of ego and self actualization needs, can be direct products of effort directed toward organizational objectives.
>
> (4) The average human being learns under proper conditions not only to accept but to seek responsibility. Avoidance of responsibility, lack of ambition and emphasis on security are generally consequences of experience, not inherent human characteristics.
>
> (5) The capacity to exercise a relatively high degree of imagination, ingenuity and creativity in the solution of organizational problems is widely, not narrowly, distributed in the population.
>
> (6) Under the conditions of modern industrial life, the intellectual potentialities of the average human being are only partly utilized.[21]

The assumptions of Theory Y strongly connote that limits on human collaboration in the organizational setting are not limits of

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[21] Ibid., pp. 47-48.

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human nature but of management's ingenuity in discovering how to realize the potential represented by its human resources. Theory X offers management an easy rationalization for ineffective organizational performance. Theory Y, on the other hand, places the problem squarely in the lap of management. If employees are lazy, indifferent, unwilling to take responsibility or uncooperative, Theory Y implies that the causes lie in the management's methods of organizational control.

Work by Herzberg, Mausner and Snyderman[22] supported the findings of McGregor. They indicated that perfect integration of organizational requirements and the individual's goals and needs is not a realistic objective. In adapting this principle, what should be sought is that degree of integration in which the individual can best achieve his goals by directing his efforts toward the success of the organization. This means that this alternative must be more attractive than the many others available to him. It means he will be highly encouraged to develop and utilize his capacities, knowledge, skills, and ingenuity in ways which contribute to the success of the organization.

Inherent in decreasing the incongruency between the individual and the organization is the psychology of man as he attempts to

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[22]Frederick Herzberg, Bernard Mausener, and Barbara Bloch Snyderman, THE MOTIVATION TO WORK (New York: John Wiley, 1959), pp. 114-115.

function within his environment. Vroom[23] made the assumption that people perform the same task differently because of their differences in ability and motivation. Traditionally, the emphasis for greater production has been on training programs to increase a person's ability to carry out a task. More recently, motivation has captured the spotlight as a strategy for increasing the performance and/or productivity of the individual.

In reviewing the literature relating to the development of the individual in the organization, one discovers the psychological foundation reported by Maslow.[24] He proposed that man is a creature of ever expanding wants. Once his basic needs have been satisfied others take their place. Thus, man's needs may be ordered in a hierarchy, starting with his basic biological requirements and proceeding through a series of levels, each more intangible than the preceding one. Once a need has been fairly well fulfilled, it no longer acts as a motivating force, and man's efforts are then directed toward satisfying the need of the next level in the hierarchy. In this hierarchy of needs Maslow has identified five levels: (1) Physiological needs, (2) Safety needs, (3) Social needs, (4) Ego needs (Self-Esteem and Status), and (5) Self-actualization needs.

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[23]Victor H. Vroom and Edward L. Deci, MANAGEMENT AND MOTIVATION (Baltimore: Penguin Books, 1970), p. 10.

[24]Abraham H. Maslow, MOTIVATION AND PERSONALITY (New York: Harper & Row, 1954), pp. 80-91.

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Others have developed the theme of the individual straining to become all that he can become. Rogers[25] emphasized the importance of endeavoring to function fully; Bruner,[26] the intrinsic value of growth strivings. Fromm[27] suggested that modern man's concept of freedom must be changed to mean freedom to be more responsible, and Herzberg,[28] that healthy individuals look for responsibility, develop commitments, and establish challenges.

Silberman,[29] Postman,[30] Featherstone,[31] Kohl,[32] and many others have suggested that the traditional school has not met the needs of the individual suggested by the above writers. The development of the multiunit elementary school (MUS) provides one vehicle for analyzing both the organizational structure and the motivation

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[25] Carl R. Rogers, ON BECOMING A PERSON (Boston: Houghton-Mifflin Co., 1961), pp. 163-196.

[26] Jerome Bruner, "The Act of Discovery", HARVARD EDUCATIONAL REVIEW, (Winter, 1961), pp. 26-28.

[27] Eric Fromm, THE ART OF LOVING (New York: Harper & Row, 1956).

[28] Frederick Herzberg and Roy M. Hamlen, "A Motivation-Hygiene Concept of Mental Health," MENTAL HYGIENE, (July, 1961), pp. 394-401.

[29] Charles E. Silberman, CRISIS IN THE CLASSROOM (New York: Random House, 1970).

[30] Neil Postman and Charles Weingartner, THE SOFT REVOLUTION (New York: Delacarte Press, 1971).

[31] Joseph Featherstone, SCHOOLS WHERE CHILDREN LEARN (New York: Liveright, 1971).

[32] Herbert R. Kohl, THE OPEN CLASSROOM (New York: Vintage Books, 1969).

of teachers because the MUS requires different roles and functions to be carried out by the administration and staff resulting in a different organizational structure than that found in the traditional elementary school.

The organization's relationship with the environment is another factor which likely will cause a difference in organizational structure between the multiunit (MUS) and non-multiunit (NMUS) elementary school. Hage and Aiken[33] defined a stable environment as one where environmental factors had attained some degree of equilibrium with the organization[34] and an unstable environment as one where environmental influences were in a state of flux.[35] They suggested that unstable environments tend to produce dynamic organizational structures characterized by low centralization and low formalization while stable environments tend to produce static organizations characterized by high centralization and high formalization.[36]

The MUS originated because various aspects of traditional elementary schools hampered school and Research and Development Center personnel in their cooperative efforts to improve children' educational opportunities. Thus, the MUS represents a recent

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[33] Jerald Hage and Michael Aiken, SOCIAL CHANGES IN COMPLEX ORGANIZATIONS (New York: Random House, 1970).

[34] Ibid., p. 71.

[35] Ibid., p. 74.

[36] Ibid., pp. 71-82.

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reaction to the environment, and may be an example of a dynamic organization while the non-multiunit elementary school, having not responded to the environment, may represent a static organization.

Theoretical Framework

This study examined the relationship between the organizational structure of two different types of schools and teacher motivation as a function of the organization's reward system. For the purpose of this study, organizational structure was defined in terms of Hage's[37] axiomatic theory of organizations. Motivation was defined in terms of Vroom's[38] and Porter and Lawler's[39] expectancy theory of motivation. A detailed explanation of each of these theories will follow as well as consideration of possible linkages between these theories.

Hage's Axiomatic Theory

Hage proposed four organizational means and four organizational ends which organizations use to accomplish specific and

[37] Jerald Hage, "An Axiomatic Theory of Organizations," in Fred D. Carver and Thomas J. Sergiovanni, (eds.), ORGANIZATIONS AND HUMAN BEHAVIOR: FOCUS ON SCHOOLS (New York: McGraw-Hill, 1969), pp. 91-110.

[38] Vroom, WORK, op. cit., pp. 8-28.

[39] Lyman W. Porter and Edward E. Lawler, III, MANAGERIAL ATTITUDES AND PERFORMANCE (Homewood, Illinois: Richard D. Irwin, Inc., 1968), pp. 15-40.

sometimes unique goals. The organizational means consist of complexity, centralization, formalization, and stratification variables while the organizational ends are comprised of adaptiveness, production, efficiency, and job satisfaction variables. The organizational means or inputs describe organizational structure; these areas also represent the major change components of the multiunit school organization. These variables are defined as follows:

Complexity: The degree to which different skills are important to the organization.[40] Indicators of complexity are the number of occupational specialties included in the organization and the length of training for each.[41]

Centralization: This refers to the hierarchy of authority--the extent to which decision making is concentrated high up in the organization or spread throughout the organization, reaching the lower levels.[42] An indicator or measure of this concept is the extent to which teachers participate in decision making and the number of areas in which they participate.[43]

Formalization: The degree to which variance is tolerated within the rules defining the jobs within an organization.[44]

[40] Hage and Aiken, SOCIAL CHANGE, op. cit., pp. 15-18.

[41] Hage, "An Axiomatic Theory," op. cit., p. 92.

[42] Hage and Aiken, SOCIAL CHANGE, op. cit., pp. 18-21.

[43] Hage, "An Axiomatic Theory," op. cit., pp. 92-93.

[44] Hage and Aiken, SOCIAL CHANGE, op. cit., pp. 21-23.

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An indicator or mreasure of this concept is the extent of formal job descriptions and rules of operation within the organization.[45]

Stratification: The importance of rewards and how they are distributed within the organization.[46] Indicators of stratification are the differences in income and prestige among jobs and the rate of mobility between low- and high-ranking jobs or status levels.[47]

Hage and Aiken suggested that there are two alternative modes for each of the above four structural variables--one formal and one informal mode. (See Figure 1). Thus, an organization can obtain a high degree of complexity in two ways: through obtaining workers with a high degree of formal training (i.e. college degrees), or by recruiting workers with large amounts of experience (i.e. in the same job for a number of years).

[45] Hage, "An Axiomatic Theory," op. cit., p. 93.

[46] Hage and Aiken, SOCIAL CHANGE, op. cit., pp. 23-25.

[47] Hage, "An Axiomatic Theory," op. cit., pp. 91-92.

Variable	Mode		Dimension
	Formal	Informal	
Complexity	Training	Experience	Skills
Centralization	Authority	Influence	Power
Formalization	Regulations	Customs	Rules
Stratification	Status	Prestige	Rewards

Figure 1

Alternative Modes of Organizational Structure[48]

Central to Hage's theory is the idea of functional strains between the variables of organizational structure. This means that all of the variables are interrelated and that an increase in one variable will result in a decrease in other variables.[49] The work of Hage and Aiken[50] suggested that the characteristics of particular organizations do not occur at random but rather are found in definite patterns. Figure 2 indicates two characteristic structural patterns of what Hage and Aiken termed the static and the dynamic type of organization. The difference in organizational style also

[48] Hage and Aiken, SOCIAL CHANGE, op. cit., p. 170.

[49] Hage, "An Axiomatic Theory", op. cit., p. 94.

[50] Hage and Aiken, SOCIAL CHANGE, op. cit., p. xiii.

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was reported by Burns and Stalker[51] who labeled them organic (dynamic) and mechanical (static).

Dynamic Model	Static Model
High complexity	Low complexity
Low centralization	High centralization
Low formalization	High formalization
Low stratification	High stratification

Figure 2

Two Ideal Types of Organizations[52]

Expectancy Theory

Teacher motivation was defined in this study in terms of the organization's reward system measured by expectancy theory as delineated by Vroom[53] and Porter and Lawler.[54] Schwab summarized expectancy theory in the following manner:

[51] Tom Burns and G. M. Stalker, THE MANAGEMENT OF MOTIVATION (London: Tavistock Publications, 1961), p. 5.

[52] Hage, "An Axiomatic Theory," op. cit., p. 99.

[53] Vroom, WORK, op. cit., pp. 8-28.

[54] Porter and Lawler, op. cit., pp. 15-40.

Expectancy theory as formulated by Vroom (1964) hypothesized that motivation or force to perform (F) is a multiplicative function of the valence of performing at some level (Vj) and the expectancy that a given amount of effort will lead to that performance level (E_{ij}). The valence of performance, in turn, is hypothesized to be a multiplicative function of the sum of the valences of the second level outcomes which may derive from performing at j(V_k) and the instrumentation that j leads to k (I_{jk}). Thus, in its most basic form the theory states that:

$$F = f\left[\left[\sum_{x=1}^{n} (V_k \times I_{jk})\right] \times E_{ij}\right]$$

All independent variables are hypothesized to be perceptual in nature. That is, motivation to perform is presumed to be influenced by the individuals subjective feelings about valences, expectancies and instrumentalities. The theory would therefore predict, for example, that it is not necessarily important whether a second level outcome (e.g., promotion) was actually contingent on high performance. Presumably an employee would be motivated to be a high performer if he valued the outcome and felt it was contingent on high performance. The actual contingency thus bears on motivation only as it may influence the perceived contingency.[55]

Figure 3 illustrates the pictorial model of expectancy theory as defined by Porter and Lawler. The following definitions are central to understanding their model:

> Value of Reward refers to how attractive or desirable is a potential outcome of an individuals behavior in the work situation.[56]
>
> Effort-reward probability refers to an individual's perception of whether differential records are based on differential amounts of effort on his part in the work situation.[57]

[55] Donald P. Schwab, "Impact of Reward System on Pay: Valence and Instrumentality Perceptions," (unpublished paper, University of Wisconsin, Madison, Wisconsin, 1972).

[56] Ibid., p. 18.

[57] Ibid., p. 21.

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Figure 3. The Theoretical Model of Expectancy Theory[58]

[58]Porter and Lawler, op. cit., p. 17.

Effort refers to the energy expended to perform some task, but does not necessarily correlate with how successfully the task is carried out.[59]

Role perceptions deal with the way in which the individual defines his job--the types of effort he believes are essential to effective job performance.[60]

Performance refers to a person's accomplishment on tasks that comprise his job. Performance, in essence, is the net effect of a person's effort as modified by his abilities and traits and by his role perceptions. It can be evaluated by objective measures such as physical output, or by subjective measures such as ratings made by others or ratings made by the individual himself.[61]

Rewards are desirable states of affairs that a person receives from either his own thinking or the actions of others. For predicting future performance, the most important things to know about rewards are their perceived size and their perceived degree of connection to past performance.[62]

Perceived equitable rewards are defined as the amount of rewards that the person feels is fair, given his performance on the tasks he has been asked to undertake by the organization.[63]

Satisfaction is defined as the extent to which rewards actually received meet or exceed the perceived equitable level of rewards. The greater failure of actual rewards to meet or exceed the perceived equitable level of rewards. The greater failure of actual rewards to meet or exceed perceived equitable rewards, the more dissatisfied a person is considered to be in a given situation.[64]

[59]Porter and Lawler, op. cit., p. 17.

[60]Ibid., p. 25.

[61]Ibid., p. 28.

[62]Ibid., p. 29.

[63]Ibid., p. 30.

[64]Ibid., p. 31.

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The model suggests that satisfaction is indirectly dependent upon performance. Brayfield and Crockett[65] reported that although many hypothesized that increased satisfaction motivated workers to produce, it made more sense to assume that individuals are motivated to achieve certain environmental goals and that the achievement of these goals resulted in satisfaction. This concept is consistent with the Porter and Lawler model. The model also can incorporate the work of Maslow[66] in that the rewards be relevant to the needs of the individual. The expectation is "that rewards will be valued by an individual to the extent that he believes they will provide satisfaction of his security, social esteem, autonomy and self-actualization needs."[67] However, extrinsic rewards may be more associated with the lower level needs while the intrinsic rewards are more associated with the higher level need of self-esteem and self-actualization.[68]

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[65] Arthur H. Brayfield and Walter H. Crockett, "Employee Attitudes and Employee Performance," in Victor H. Vroom and Edward L. Deci, (eds.), MANAGEMENT AND MOTIVATION (Baltimore: Penquin Books, 1970), pp. 72-73.

[66] Maslow, op. cit.

[67] Edward E. Lawler III, and Lyman Porter, "Antecedent Attitudes of Effective Managerial Performance," in Victor H. Vroom and Edward L. Deci, (eds.), MANAGEMENT AND MOTIVATION (Baltimore: Penquin Books, 1970), p. 257.

[68] Edward E. Lawler III, "Job Design and Employee Motivation," in Victor H. Vroom and Edward L. Deci, (eds.), MANAGEMENT AND MOTIVATION (Baltimore: Penquin Books, 1970), p. 162.

There are several pieces of research which suggest a possible linkage between organizational structure and teacher motivation. First, if the development of the multiunit school is indeed a movement toward a more dynamic organization, it is conceivable that the teachers might view their new work roles as being an act on the part of administration to bestow greater recognition and responsibility on particular teachers, such as team leaders. The change in structure may also be seen as an organizational advancement by some teachers. Herzberg[69] stated that recognition, responsibility and advancement were important factors in job satisfaction, which as the model indicates, is a product of greater performance brought about by greater effort. This change in role, the stratification variable of Hage's[70] axiomatic theory of organizational structure, is of particular importance in attempting to explain motivation. Barnard[71] reasoned that the desire to advance through the organizational strata would lead to greater work commitment and greater effort on the part of the worker. Barnard also pointed out that income was not the only reward factor which could be utilized to elicit greater motivational levels. Prestige and esteem could also be employed. Vroom's[72]

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[69] Herzberg, Mausner, and Bloch, op. cit.

[70] Hage, "An Axiomatic Theory," op. cit., pp. 91-110.

[71] Chester Barnard, "Functions and Pathology of Status System in Formal Organizations," in William Foote Whyte (ed.), INDUSTRY AND SOCIETY (New York: McGraw-Hill, 1946), pp. 46-83.

[72] Victor H. Vroom, WORK AND MOTIVATION (New York: John Wiley, 1964), pp. 5-28.

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model of expectancy theory provides another important link between organizational structure and motivation because "importance of rewards" (stratification to use Hage's term) constitutes the "valence of second-level outcomes" (Vroom's term) component of motivation. This being the case, one would expect that the change in role or structure of the MUS organization could cause a change in the level of teacher motivation.

Vroom stated that persons who are given an opportunity to participate in making decisions which have future effects on them perform at a higher level than those who are not given such an opportunity.[73] This statement links Hage's centralization variable directly to performance. Vertical job enlargements (another form of decentralization as far as the MUS is concerned) was reported by Lawler[74] to have a positive effect on motivation.

The dynamic organization, being more professionally oriented, may have a tendency to produce less anxiety in the work situation. Should this be so, Vroom[75] would predict an increase in the performance of the workers. This would again link organizational structure and motivation.

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[73]Vroom, WORK AND MOTIVATION, op. cit., p. 267.

[74]Lawler, op. cit., p. 168.

[75]Victor H. Vroom, "The Nature of the Relationship Between Motivation and Performance," in Victor H. Vroom and Edward L. Deci, (eds.), MANAGEMENT AND MOTIVATION (Baltimore: Penquin Books, 1970), p. 233.

The number of individuals within the organization may produce an anxiety laden environment detrimental to motivation and/or performance because of the stresses it may cause. Hall stated,

> Large size has an impact on the individuals in the organization. There is more stress, and the depersonalization process can lead to a great deal of discomfort for many members. These negative consequences are at least partially alleviated by the presence of informal friendship groups found in all organizations.[76]

The multiunit school may formally provide the friendship groups mentioned above. Size, as measured by the number of certified staff members on the school staff, constituted a fifth independent variable in the study.

Hypotheses to be Tested

The purpose of this study was to examine the relationships between organizational structure and teacher motivation in MUS and non-multiunit (NMUS) elementary schools in order to determine in what ways the MUS type of organization may be more compatible with the needs of individual teachers. The following hypotheses formed the basis of the study. It was hypothesized that there will be no significant difference between:

1. The number of teachers in MUS and NMUS elementary schools.
2. The complexity of organization in MUS and NMUS elementary schools.

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[76]Richard H. Hall, ORGANIZATIONS: STRUCTURE AND PROCESS (Englewood Cliffs: Prentice-Hall, 1972), p. 138.

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3. The perceived centralization of decision making in MUS and NMUS elementary schools.
4. The perceived formalization of the organization in MUS and NMUS elementary schools.
5. The perceived stratification of the organization in MUS and NMUS elementary schools.
6. The motivation of teachers in MUS and NMUS elementary schools.

It also was hypothesized that there will be no significant relationship between:

7. The number of teachersand teacher motivations in MUS elementary schools.
8. The complexity of organization and teacher motivation in MUS elementary schools.
9. The perceived centralization of decision making and teacher motivation in MUS elementary schools.
10. The perceived formalization of the organization and teacher motivation in MUS elementary schools.
11. The perceived stratification of the organizacion and teacher motivation in MUS elementary schools.
12. The number of teachers and teacher motivation in NMUS elementary schools.
13. The complexity of organization and teacher motivation in NMUS elementary schools.
14. The perceived centralization of decision making and teacher motivation in NMUS elementary schools.

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15. The perceived formalization of the organization and teacher motivation in NMUS elementary schools.
16. The perceived stratification of the organization and teacher motivation in NMUS elementary schools.

Significance and Limitations

The study was significant for several reasons. First, it was hoped that the study would be able to shed some light on how schools can alter their structures and reward systems to increase teacher motivation to carry out their essential tasks. Second, instruments and methodology were developed to help further research in the area of organizational structure variables and motivation. Third, it helped establish the relative importance of different kinds of rewards to teachers.

There are also limitations to the study which should be indicated. First, the study was limited to public elementary schools in the State of Wisconsin and, therefore, results of the study may not extend beyond that limited population. Second, only one organizational level (teachers) was studied although it is obvious that several levels exist within any organization.

Overview of the Study

This chapter included consideration of the nature of the study, a review of the related literature, the theoretical framework

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for the study, the hypotheses to be tested, and the significance and limitations of the study. In Chapter II the design of the study is described. Chapter III includes a description of the data analysis and findings. In Chapter IV, a summary of the findings, conclusions, and implications for further research and practice are presented.

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CHAPTER II

DESIGN OF THE STUDY

Kerlinger[1] divided the field of social scientific research into four major categories: laboratory experiments, field experiments, field studies, and survey research. Katz[2] subdivided field studies into two broad types: exploratory and hypothesis-testing. The exploratory type of field study attempts to ascertain "what is" while the hypothesis-testing type endeavors to predict relationships between variables. This study encompassed both types of field studies. It attempted to discover the relative organizational structure of both multiunit (MUS) and non-multiunit (NMUS) elementary schools as well as to ascertain relationships between the variables of organizational structure and the motivational level of teachers.

This chapter will describe the study population, sampling technique, data collection, instrumentation, and methods of analysis utilized in the study.

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[1]Fred N. Kerlinger, FOUNDATIONS OF BEHAVIORAL RESEARCH (New York: Holt, Rinehart and Winston, 1964), p. 375.

[2]L. Festinger and D. Katz, RESEARCH METHODS IN THE BEHAVIORAL SCIENCES, (New York: Holt, Rinehart and Winston, 1953), in Fred N. Kerlinger, FOUNDATIONS OF BEHAVIORAL RESEARCH, (New York: Holt, Rinehart and Winston, 1964), p. 388.

The Study Population

The original population for this study consisted of all public elementary schools in the State of Wisconsin (outside the Milwaukee School District) which had ten or more staff members as of September, 1971. The schools in Milwaukee were eliminated because being governed by different state statutes as they are and being in the only major metropolitan area in the state, it was felt they were atypical of the elementary schools in the State of Wisconsin. The original population was divided into two sub-populations by separating out the schools which had implemented the multiunit elementary school (MUS) concept. The remaining subpopulation of 738 schools was labeled non-multiunit elementary schools.

The multiunit school (MUS) sub-population was submitted to additional criteria before being sampled. Multiunit schools which had not been in operation for at least one school year as of September, 1971, were eliminated. The remaining list of schools was submitted to George Glassrud, an employee of the Department of Public Instruction and a consultant to the research and Development Center, who eliminated schools which claimed to be multiunit but which, in his judgment, were not implementing the concept fully or correctly. This left a sub-population of 61 multiunit elementary schools (MUS). Table I illustrates the selection process which defined each sub-population.

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TABLE I

SELECTION CRITERIA USED TO DEFINE THE MUS AND NMUS SUBPOPULATIONS

Criteria	Number	Balance
Total number of elementary schools in the State of Wisconsin, 1971[1]	1,739	
Number of elementary schools with fewer than 10 staff members[1]	758	981
Number of elementary schools in Milwaukee[1]	116	865
Number of MUS[2]	127	738[3]
Number of MUS[2]	127	
Number of MUS in operation for less than one year[2]	55	72
Number of MUS not actually functioning in the MUS mode[4]	11	61[5]

[1]Source: State of Wisconsin, Department of Public Instruction.

[2]Source: University of Wisconsin, Research and Development Center for Cognitive Learning.

[3]Subpopulation: Non-multiunit Elementary Schools (NMUS)

[4]Source: George Glassrude, State of Wisconsin, Department of Public Instruction.

[5]Subpopulation: Multiunit Elementary Schools (MUS)

From each subpopulation, a random sample of 40 schools was selected. Teacher attitudes and perceptions were agregated to establish a measure for each unit of analysis (the individual school). For schools with ten to fifteen staff members, all staff members were given questionnaires. For schools with more than fifteen staff members, a random sample of fifteen teachers was selected. All random samples were generated using the IRANDX[3] computer program.

Collection of the Data

Once the sample schools had been selected, the principals of each school were contacted by telephone to elicit their cooperation and support of the study. The principals of one NMUS and three MUS elementary schools refused to participate in the study at this time, stating that they were either too busy during the last month of school to be bothered or that their schools had been so inundated by studies already that they believed they could not ask their staffs to answer any more questionnaires.

Packets were prepared for each school which agreed to participate. Each packet consisted of the following items:

[3]Dennis W. Spuck and Donald N. McIsaac, "Program IRANDX," (unpublished paper, Wisconsin Information Systems for Education, University of Wisconsin, Madison, Wisconsin, Revision 3, September, 1971).

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1. A large mailing envelope addressed to the principal of each school containing all other materials.
2. A cover letter giving specific directions to the principal for distributing, completing, and returning the questionnaires to the researcher (See Appendix A).
3. An Organizational Complexity checklist to be completed by the principal (See Appendix B).
4. A list of teachers who should receive the questionnaires.
5. A labelled envelope containing a questionnaire for each teacher to be surveyed (See Appendix C).
6. A self-addressed, stamped envelope for the batch return of all of the questionnaires and the complexity checklist.

The packets were mailed in early May, 1972 and data collection continued for the remainder of that month. Follow-up telephone calls and letters were used to obtain responses from schools which did not return their questionnaires and/or checklists after two weeks (See Appendix D).

One Non-multiunit school and three Multiunit schools did not return the questionnaires, even with follow-up attempts. The reasons given for non-reply were the same as those for non-participation. No factor seemed to differentiate the respondents from the non-respondents. Table II details the return by type of school. The principal and the teacher returns by school are listed in Table III for NMUS and in Table IV for MUS.

It should be noted that although both MUS and NMUS had about the same rate of teacher returns (89 and 90 percent), the pattern of returns was different. The MUS had more perfect returns (100%) and

TABLE II

SUMMARY OF SCHOOL PARTICIPATION

	NMUS		MUS	
	Number	%	Number	%
Total number of schools in sample	40	100.0	40	100.0
Number of schools refusing to participate	1	2.5	3	7.5
Number of schools agreeing to participate	39	97.5	37	92.5
Number of schools refusing to return questionnaires	1	2.5	3	7.5
Total number of respondent schools	38	95.0	34	85.0

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TABLE III

RETURNS OF PRINCIPALS AND TEACHERS OF NON-MULTIUNIT SCHOOLS AGREEING TO PARTICIPATE

School Number	Principals (Checklist)			Teachers (Questionnaire)		
	Sent	Returned	%	Sent	Returned	%
1	1	1	100	12	12	100
2	1	1	100	10	8	80
3	1	1	100	15	14	93
4	1	1	100	15	15	100
5	1	1	100	11	9	82
6	1	1	100	15	14	93
7	1	1	100	15	14	93
8	1	1	100	15	10	67
9	1	1	100	11	11	100
10	1	1	100	15	12	80
11	Did not respond after agreeing to participate					
12	1	1	100	15	13	87
13	1	1	100	15	15	100
14	1	1	100	15	13	87
15	1	1	100	13	12	92
16	1	1	100	15	14	93
17	1	1	100	13	13	100
18	1	1	100	15	15	100
19	1	1	100	15	12	80
20	1	1	100	15	8	53
21	1	1	100	15	15	100
22	1	1	100	10	10	100
23	1	1	100	11	11	100
24	1	1	100	15	14	93
25	1	1	100	15	15	100
26	1	1	100	15	15	100
27	1	1	100	15	12	80
28	1	1	100	11	9	82
29	1	1	100	15	14	93
30	1	1	100	11	8	73
31	1	1	10	15	13	87
32	1	1	100	12	11	92
33	1	1	100	15	14	93
34	1	1	100	15	15	100
35	1	1	100	15	15	100
36	1	1	100	15	14	93
37	1	1	100	12	9	75
38	1	1	100	15	15	100
39	1	1	100	13	9	69
Total[1]	38	38	100	525	472	90

[1]Totals and overall percentaged do not include schools which did not respond after agreeing to participate.

TABLE IV

RETURNS OF PRINCIPALS AND TEACHERS OF MULTIUNIT SCHOOLS AGREEING TO PARTICIPATE

School Number	Principals (Checklist)			Teachers (Questionnaire)		
	Sent	Returned	%	Sent	Returned	%
40	1	1	100	10	5	50
41	1	1	100	15	15	100
42	1	1	100	15	15	100
43	1	1	100	10	10	100
44	1	1	100	14	13	93
45	1	1	100	15	14	93
46	Did not respond after agreeing to participate					
47	1	1	100	15	15	100
48	1	1	100	15	15	100
49	1	1	100	15	13	87
50	1	1	100	15	14	93
51	1	1	100	15	15	100
52	1	1	100	15	15	100
53	1	1	100	15	15	100
54	1	1	100	15	14	93
55	1	1	100	15	14	93
56	1	1	100	15	15	100
57	1	1	100	15	15	100
58	1	1	100	15	14	93
59	1	1	100	15	8	53
60	1	1	100	15	14	93
61	1	1	100	13	8	62
62	1	1	100	15	10	67
63	1	1	100	15	15	100
64	1	1	100	15	13	87
65	1	1	100	15	14	93
66	1	1	100	15	12	80
67	1	1	100	13	13	100
68	1	1	100	14	8	57
69	Did not respond after agreeing to participate					
70	Did not respond after agreeing to participate					
71	1	1	100	15	11	73
72	1	1	100	15	15	100
73	1	1	100	15	9	60
74	1	1	100	15	14	93
75	1	1	100	15	15	100
76	1	1	100	13	13	100
Total[1]	34	34	100	492	438	89

[1]Totals and overall percentages do not include schools which did not respond after agreeing to participate.

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more very low return rates and had the minority in the moderately high range. Table V shows the pattern of teacher return by school type.

TABLE V

TEACHER RETURN RATE PATTERNS:
MUS AND NMUS SCHOOLS

Return Rate (Percentage)	MUS		NMUS	
	Number	%	Number	%
Perfect--100	15	44	14	37
70 - 99	13	38	21	55
Less than 70	6	18	3	8
Totals	34	100	38	100

During the follow-up process, several reasons for non-response on the part of the teachers were discovered. These reasons were as follows:

1. The teacher had died during the school year.
2. The teacher was no longer on the staff of the particular school due to:
   a. being fired.
   b. quitting.
   c. a leave of absence.
   d. extended illness.
   e. being transferred within the school district.
3. The list of teachers supplied the Department of Public Instruction by the school was incorrect and contained the names of people who would be inappropriate for the study.
   a. Teachers no longer on the staff.
   b. Teacher aides and teacher interns.
   c. School psychologists, play therapists, and half-time teachers.
4. The teacher felt it was too much work and simply refused to fill out the questionnaire.

Instrumentation

To compare and relate the variables of organizational structure and teacher motivation, the attitudes and perceptions of school staff members were required to establish scores for the individual schools. To obtain these scores, a questionnaire was developed. The purpose of this questionnaire was to translate theoretical constructs into observable indices which could be used for description and explanation. Each scale will be discussed in terms of the theoretical construct(s) it purports to measure.

Organizational Structure

Organizational structure was defined in terms of Hage's axiomatic theory of organizations.[4] The variables were operationalized along lines similar to those of Hetzel,[5] but modified better to suit the population of public elementary school teachers.

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[4]Jerald Hage and Michael Aiken, SOCIAL CHANGE IN COMPLY ORGANIZATIONS (New York: Random House, 1970).

[5]Robert W. Hetzel, "The Relationship Between Organizational Structure and Organizational Adaptability in Departments of Curriculum and Instruction," (unpublished Doctoral dissertation, University of Wisconsin, Madison, Wisconsin, 1971), Appendix A, pp. 88-90.

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School size was measured in terms of the number of staff members in the school according to lists obtained through the State of Wisconsin Department of Public Instruction. The range of scores for this index was 10 through 35.

Complexity is the degree to which different kinds of skills are represented within an organization.[6] Hage[7] suggested that the number of occupational specialties in the organization was an indicator of complexity. The Organizational Complexity checklist included the different specialties which might be found in an elementary school (See Appendix B). It was to be completed by the principal, the individual most likely to be aware of all of the different specialists in the building. The complexity index was tabulated by summing the number of different specialties checked.

Centralization is the degree to which decision making is concentrated high up in the organization or spread throughout the organization, reaching the lower levels.[8] The extent to which staff members participate in decision making and the number of areas in which they participate are measures of centralization.[9] Page two (items 1-12) of the teacher questionnaire contains the centralization scale. The questions represent different areas in which teachers might be expected to make decisions (See Appendix C). The extent of their participation was measured using a five-point Likert[10] scale. A centralization score was computed for each teacher by summing the scores for each item of the scale. High scores indicated centralized organizations while low scores characterized decentralized schools.

Formalization is the degree to which the organization tolerates variance within the jobs of the organization.[11] Since formal job description and rules of operation define these tasks, Hage[12] has suggested that one measure of formalization is the extent of and required adherence to formal job descriptions and rules of operation. The formalization scale is found on pages two and three (items 13-18) of the teacher questionnaire (See Appendix C). Each question attempted to determine, by use of a five-point Likert[13] scale, the extent to which the school requires strict adherence to formal rules and regulations. The scores for each item were summed to determine a formalization score for each teacher. A low score indicated a

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[6] Jerald Hage and Michael Aiken, SOCIAL CHANGE IN COMPLEX ORGANIZATIONS (New York: Random House, 1970), pp. 15-18.

[7] Jerald Hage, "An Axiomatic Theory of Organizations," in Fred D. Carver and Thomas J. Sergiovanni (eds.), ORGANIZATIONS AND HUMAN BEHAVIOR: FOCUS ON SCHOOLS (New York: McGraw-Hill, 1959), p. 92.

[8] Hage and Aiken, SOCIAL CHANGE, op. cit., pp. 18-21.

[9] Hage, "An Axiomatic Theory," op. cit., pp. 92-93.

[10] Gilbert Sax, EMPIRICAL FOUNDATIONS OF EDUCATIONAL RESEARCH, (Englewood Cliffs, New Jersey: Prentice Hall, 1968), pp. 219-220.

[11] Hage and Aiken, SOCIAL CHANGE, op. cit., pp. 21-23.

[12] Hage, "An Axiomatic Theory," op. cit., p. 93.

[13] Sax, op. cit., pp. 219-220.

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highly formal school while a high score was an indication of a school low in formalization.

Stratification refers to the importance of rewards and how they are distributed within the organization.[14] Stratification may be operationalized by measuring the extent to which status levels exist within the organization.[15] The stratification scale is located on pages three and four (items 19-30) of the teacher questionnaire (See Appendix C). Each item was designed to determine the extent to which some teachers had more prestige or status than others; a five-point Likert[16] scale was used. The scores for each item were summed to determine a stratification score for each teacher. A low score indicated a high degree of stratification while a high score was indicative of an organization perceived to be low in stratification.

Teacher Motivation

Teacher motivation was operationalized in terms of Vroom's[17] and Porter and Lawler's[18] model of expectancy theory. The importance

[14]Hage and Aiken, SOCIAL CHANGE, op. cit., pp. 23-25.

[15]Hage, "An Axiomatic Theory." op. cit., pp. 91-92.

[16]Sax, op. cit., pp. 219-220.

[17]Victor H. Vroom, WORK AND MOTIVATION, (New York: John Wiley, 1964), pp. 8-28.

[18]Lyman W. Porter and Edward E. Lawler, III, MANAGERIAL ATTITUDES AND PERFORMANCE, (Homewood, Illinois: Richard D. Irwin, 1968), pp. 15-40.

of a reward and the probability of receiving the reward after a good performance on the job are said to interact in a multiplicative fashion to determine the effort or motivational level of the individual. According to the theory, a particular reward was highly motivational in nature if a teacher felt it was both important and there was a high probability of receiving it as a result of a successful teaching performance. The reward was seen as non-motivational if the reward was unimportant and the likelihood of receiving it was small. The reward was considered to motivate to a limited extent if it was seen as important but the probability of receiving it was small or if it was unimportant but the probability of receiving it was great.

The motivation items appear on pages four through eight (items 31-100) of the teacher questionnaire (See Appendix C). The list of possible rewards or secondary outcomes was derived from Spuck's Teacher Reward and Satisfaction Scale (TRASS).[19] Spuck presented eight reward categories derived from the works of Barnard, Maslow, Katz and Kahn, and Lortie. Spuck labelled these categories as follows:

1. Ability to influence school policy
2. Environmental working conditions
3. Support and recognition of community
4. Social relations with peers
5. Physical conditions

[19]Dennis W. Spuck, "Reward Structures in Public High Schools," (unpublished Doctoral dissertation, Claremont Graduate School, Claremount, California, 1970), pp. 200-229.

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6. Pride of workmanship
7. Material incentives
8. Agreement with district goals and policies.

Items based on each of the eight categories were used but modified to some extent to fit the elementary school. The importance of the reward (valence) and the probability of receiving the rewards were collected on each reward item using a five-point Likert[20] scale. Motivation scores for each item were obtained by taking the product of the importance score and the probability score.[21] Overall motivation scores for each teacher were determined by summing the motivation scores over all items.

Factor analysis[22] techniques were used to assign each of the possible rewards on the motivation scale to a group consisting of items with similar characteristics (See Appendix E). These categories were then named to reflect, insofar as possible, the factor common to all items in the same group.

Unit of Analysis Scores

The unit of analysis for the study was the individual school. School size and complexity scores were measured directly. School scores for the variables of centralization, formalization, stratification, and motivation were obtained by computing the mean of the

[20]Sax, op. cit., pp. 219-220.

[21]H. Scott Herrick, "Program SCOTT.CARD," (unpublished paper, University of Wisconsin, Madison, Wisconsin, 1972).

[22]Fred N. Kerlinger, FOUNDATIONS OF BEHAVIORAL RESEARCH. (New York: Holt, Rinehart and Winston, 1964), pp. 650-687.

teacher scores for each variable within each school.[23]

Reliability and Validity

The reliability of an instrument is the degree to which it consistently measures whatever it actually does measure.[24] Three different types of reliability coefficients have been differentiated by the American Psychological Association: stability, equivalence, and internal consistency.[25] Each measure for this study had several items and it was necessary to determine how well each item measured the same thing as the other items on the same scale. Therefore, the index of internal consistency was used to establish the reliability of each scale.

The split-half method is one procedure for deriving an index of internal consistency.[26] After the test is given, it is divided into two separate halves and scored. The scores are then correlated with one another to compute the index of internal consistency. Coefficient Alpha is a special technique which provides an estimate of the average reliability for all possible splits provided the test is a power test, rather than a speed test, and it will not be

[23]H. Scott Herrick, "Program SCOTT.MESS," (unpublished paper, University of Wisconsin, Madison, Wisconsin, 1972.

[24]Joseph Tiffin and Ernest McCormick, INDUSTRIAL PSYCHOLOGY, (Englewood Cliffs, New Jersey: Prentice-Hall, 1965), p. 129.

[25]"Technical Recommendations for Psychological Tests and Diagnostic Techniques," SUPPLEMENT TO THE PSYCHOLOGICAL BULLETIN, 51 (March, 1954),

[26]Tiffin and McCormick, op. cit., p. 129.

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influenced over time as in measures of stability.[27] Nunnally[28] expressed the formula for Coefficient Alpha as follows:

$$r_{kk} = \frac{k}{k-1}\left(1 - \frac{\sum \sigma_i^2}{\sigma_y^2}\right)$$

where,

k = the number of items in the scale or test

σ_i^2 = the standard deviation of items in the scale or test

σ_y^2 = the standard deviation of the scale or test

Alphas were computed for each perceptual variable during the pilot study using program TSTAT.[29] Revisions were then made to increase the reliability of each scale. Table VI gives the Alphas before and after revision.

TABLE VI

PILOT STUDY TEST RELIABILITY

Test	Before Revision		After Revision	
	Item N	Alpha	Item N	Alpha
Centralization	12	.8548	12	.8577
Formalization	12	.5259	6	.6055
Stratification	14	.8476	12	.8911
Motivation	74	.8854	70	.8973

[27] Sax, op. cit., pp. 160-162.

[28] Jum C. Nunnally, PSYCHOMETRIC THEORY, (New York: McGraw-Hill, 1967), p. 196.

[29] Dennis W. Spuck, "Program TSTAT," (unpublished paper, Wisconsin Information Systems for Education, University of Wisconsin, Madison, Wisconsin, 1971).

The validity of a test refers to the degree to which the test is capable of achieving the aims or purposes it was intended to serve.[30] The American Psychological Association has identified four types of validity: content, predictive, concurrent, and construct.[31] To insure that each scale had sampled as much of the subject matter domain as possible, groups of "experts" were used to evaluate the content validity. Judgments on the content were obtained from the following sources:

1. the literature
2. graduate students in the field of educational administration
3. professors in the field of educational administration
4. MUS and NMUS teachers during the pilot study.

Analysis of the Data

Hypotheses one through six required that the mean scores of the MUS and NMUS be compared to see if significant differences existed. One-way analysis of variance was used to compare these means.[32] The computations were carried out using the STATJOB*ONEWAY1[33] computer program.

[30] Tiffin and McCormick, op. cit., p. 127.

[31] "Technical Recommendations," op. cit.

[32] William L. Hays, STATISTICS FOR PSYCHOLOGISTS, (New York: Holt, Rinehart, and Winston, 1963), pp. 356-385.

[33] "One-Way Analysis of Variance--ONEWAY1." STATJOB (University of Wisconsin Computing Center, Madison, Wisconsin, 1966), Vol. VI - Section 3.3, pp. 1-32.

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Hypotheses seven through sixteen attempted to determine if any of the variables of organizational structure were useful in helping predict the level of teacher motivation. Multiple regression techniques allow one to predict from several variables considered simultaneously.[34] This prediction equation is based on the assumption that the relationships between variables are linear. Consequently, the analysis focused on the questions of whether a linear relationship existed, the strength of the relationship, and the usefulness of a linear equation in predicting the motivational levels of teachers.[35] Stepwise multiple regression has the additional feature of allowing one to observe the individual predictive contribution of each variable as it is added to the regression equation.[36] Stepwise multiple linear regression was the specific technique used for each group and it was calculated using the STEPREG1[37] computer program using a runstream translation prepared by the SETSTP[38] computer program.

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[34] Hays, op. cit., p. 567.

[35] Ibid., p. 491.

[36] Frederick P. Stofflet and Dennis W. Spuck, "Program WISE*LIB. SETSTP," (unpublished paper, Wisconsin Information Systems for Education, University of Wisconsin, Madison, Wisconsin, 1971), pp. 6-7.

[37] "Stepwise Multiple Regression Analysis - STEPREG1," STATJOE (University of Wisconsin Computing Center, Madison, Wisconsin, 1969), Vol. VI - Section 3-7, pp. 1-85.

[38] Stofflet and Spuck, op. cit.

The 70 items on the motivation scale were factor analyzed to reduce them to several smaller, homogeneous groups in the hope that some general motivational categories could be ascertained (See Appendix E). This was done using the BIGFACT[39] computer program.

All computations were carried out at the University of Wisconsin Computing Center under a grant provided by the University of Wisconsin Graduate School.

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[39] Dennis W. Spuck and Donald N. McIsaac, "Program BIGFACT," (unpublished paper, Wisconsin Information Systems for Education, University of Wisconsin, Madison, Wisconsin, 1972).

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CHAPTER III

PRESENTATION OF THE DATA

This chapter consists of two sections. The first section deals with data related to a comparison of multiunit (MUS) and non-multiunit (NMUS) elementary schools on each of the independent and dependent variables as dictated by Hypotheses one through six. The second section deals with Hypotheses seven through sixteen which analyze the relationships between the variables of organizational structure and teacher motivation.

Comparison of School Types

The comparison of school types was carried out by applying analysis of variance[1] techniques to the mean scores for each variable for each MUS and NMUS. The group means and standard deviations for each variable are listed in Table VII. Table VII also shows the direction of the differences between school types even though some of these differences were not significant at the .05 level.

[1] William L. Hays, STATISTICS FOR PSYCHOLOGISTS (New York: Holt, Rinehart, and Winston, 1963), pp. 356-385.

TABLE VII

SUMMARY OF DESCRIPTIVE STATISTICS FOR EACH VARIABLE

Variable Name	MUS (N=34) Mean	MUS (N=34) sd	NMUS (N=34) Mean	NMUS (N=34) sd
Size	20.41	6.12	18.58	6.67
Complexity	15.88	4.08	15.76	3.77
Centralization	38.20	4.38	42.40	4.06
Formalization[1]	18.12	2.77	18.04	1.90
Stratification[1]	40.15	3.71	37.15	4.70
Motivation related to working conditions	363.50	57.40	369.11	31.33
Motivation related to administration	274.62	32.66	274.84	28.95
Motivation related to fringe benefits	135.79	23.88	113.97	13.84
Motivation related to social relations	163.79	18.61	142.79	15.52
Motivation related to decision making	129.47	15.09	110.55	15.74
Motivation related to all categories (TOTAL)	1067.60	103.71	1011.30	93.58

[1] Item scaling was reversed; that is the higher the score, the less the characteristic. In subsequent reporting of correlational data, the signs were reversed on these variables to clarify directional relationships.

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Differences in Independent Variables

Table VIII summarizes the various analysis of variance tables for Hypotheses one through five. It indicates that there were no significant differences between MUSs and NMUSs in the variables of size, complexity, and perceived formalization. Thus,

Hypothesis 1: There is no significant difference in the number of staff members between multiunit (MUS) and non-multiunit (NMUS) schools,

and

Hypothesis 2: There is no significant difference in the complexity of organization between multiunit (MUS) and non-multiunit (NMUS) elementary schools,

and

Hypothesis 4: There is no significant difference in perceived formalization between multiunit (MUS) and non-multiunit (NMUS) elementary schools

could not be rejected at the .05 level of significance.

Table VIII indicates a highly significant difference between MUSs and NMUSs in perceived centralization and stratification.

Hypothesis 3: There is no significant difference in perceived centralization of decision making between multiunit (MUS) and non-multiunit (NMUS) elementary schools

and

Hypothesis 5: There is no significant difference in perceived stratification between multiunit (MUS) and non-multiunit (NMUS) elementary schools

were rejected at the .05 level of significance. NMUSs were found to be more centralized and more stratified than MUSs.

TABLE VIII

HYPOTHESES ONE THROUGH FIVE
DIFFERENCES IN ORGANIZATIONAL STRUCTURE
BETWEEN MULTIUNIT AND NON-MULTIUNIT ELEMENTARY SCHOOLS

Variable	Mean Square Between	Mean Square Within	F-Ratio	Significance Level
Size	60.2788	40.1357	1.465	.230
Complexity	.2546	15.3771	.017	.898
Centralization	316.8877	17.7594	17.843	.000
Formalization	.1016	5.5315	.018	.893
Stratification	161.8447	18.1364	8.924	.004

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Differences in Dependent Variables

The variable of teacher motivation was subdivided into five (5) subvariables based upon the different types of possible rewards available to teachers.[2] The categories were labeled according to rewards having to do with: 1) working conditions, 2) administration, 3) fringe or negotiated benefits, 4) social relations, and 5) involvement in decision making and policy formulation. Each subcategory score, as well as the total motivation score, was treated as a separate dependent variable.

Table IX summarizes the various analysis of variance tables for each subcategory as well as for total motivation. There was no significant difference between MUSs and NMUSs in motivation related to working conditions or administration.

Table IX indicates a highly significant difference between MUSs and NMUSs in motivation related to fringe benefits, social relations, and involvement in decision making. There was also a highly significant difference between school types in total teacher motivation. Thus,

Hypothesis 6: There is no significant difference in teacher motivation between multiunit (MUS) and non-multiunit (NMUS) elementary schools

was rejected at the .05 level of significance. Teachers in MUSs were significantly more motivated to do their job than teachers in NMUs--

[2] See Appendix E for a complete discussion of the analysis to subdivide the motivation scale into five (5) subscales.

TABLE IX

HYPOTHESIS SIX
DIFFERENCES IN TEACHER MOTIVATION
BETWEEN MULTIUNIT AND NON-MULTIUNIT ELEMENTARY SCHOOLS

Variable	Mean Square Between	Mean Square Within	F-Ratio	Significance Level
Motivation related to working conditions	563.7500	2,071.9732	.272	.604
Motivation related to administration	.7500	945.8165	.001	.978
Motivation related to fringe benefits	8,543.8906	370.0078	23.091	.000
Motivation related to social relations	7,916.9687	298.9414	26.483	.000
Motivation related to decision making	6,422.1094	238.2555	26.955	.000
Motivation related to all categories (TOTAL)	57,047.000	9,699.1785	5.882	.018

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especially when rewards for good performance were related to fringe benefits, social relations, and/or involvement in decision making.

Relationships Between Variables

Pearson product-moment correlations[3] were used to develop a background useful in interpreting the additional data. Table X contains the correlation matrix for MUSs while Table XI contains simular information related to NMUSs. Each correlation matrix was subdivided into three major sections in order to examine the relationships between 1) the variables of organizational structure, 2) the variables of organizational structure and teacher motivation, and 3) the variables of teacher motivation.

Multiple linear regression[4] techniques were used to determine the extent to which the variables of organizational structure were useful in predicting each of the categories of teacher motivation. Since the motivation scale had been divided into five subscales, the techniques of multiple linear regression were applied to each subscale as well as to the overall motivation scale. In addition, multiple linear regression was applied to MUSs and NMUSs separately.

First, the relationships existing within the independent variables will be examined using Pearson product-moment correlations.

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[3] Hays, op. cit., pp. 490-538.

[4] Leonard A. Marascuilo, STATISTICAL METHODS FOR BEHAVIORAL SCIENCE RESEARCH (New York: McGraw-Hill, 1971), pp. 473-497.

TABLE X

CORRELATION MATRIX
MULTIUNIT SCHOOLS
N=34

Variable Name	Size	Complex	Central	Formal	Strat
Size	1.000				
Complexity	.174	1.000			
Centralization	.139	.098	1.000		
Formalization	-.100	.048	.277	1.000	
Stratification	.010	.265	.497	.195	1.000
Working Conditions	-.371	.122	-.328	.154	-.225
Administration	-.160	.078	-.258	.071	-.283
Fringe Benefits	.266	.073	-.084	-.275	-.255
Social Relations	.151	.182	-.243	-.176	-.403
Decision Making	.259	-.031	-.587	-.356	-.599
Overall (TOTAL)	-.128	.134	-.410	-.040	-.424

p ($R \geq .339$) = .05

p ($R \geq .437$) = .01

TABLE X

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CORRELATION MATRIX (CONTINUED)
MULTIUNIT SCHOOLS
N=34

Variable Name	Working Conditions	Administration	Fringe Benefits	Social Relations	Decision Making	Overall (TOTAL)
Working Conditions	1.000					
Administration	.762	1.000				
Fringe Benefits	-.338	.190	1.000			
Social Relations	.107	.522	.778	1.000		
Decision Making	.117	.492	.629	.744	1.000	
Overall (TOTAL)	.750	.941	.330	.685	.643	1.000

p ($R \geq .339$) = .05

p ($R \geq .437$) = .01

TABLE XI

CORRELATION MATRIX
NON-MULTIUNIT SCHOOLS
N=38

Variable Name	Size	Complex	Central	Formal	Strat
Size	1.000				
Complexity	.351	1.000			
Centralization	-.059	-.304	1.000		
Formalization	-.001	-.048	.219	1.000	
Stratification	.118	-.185	.195	-.248	1.000
Working Conditions	.265	.227	-.593	.101	-.333
Administration	.209	.475	-.542	-.042	-.394
Fringe Benefits	.103	.334	-.457	.040	-.249
Social Relations	.296	.457	-.540	.073	-.429
Decision Making	.202	.430	-.647	.018	-.359
Overall (TOTAL)	.254	.422	-.634	.042	-.404

p ($R \geq .320$) = .05

p ($R \geq .413$) = .01

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TABLE XI

CORRELATION MATRIX (CONTINUED)
NON-MULTIUNIT SCHOOLS
N=38

Variable Name	Working Conditions	Adminis-istration	Fringe Benefits	Social Relations	Decision Making	Overall (TOTAL)
Working Conditions	1.000					
Administration	.757	1.000				
Fringe Benefits	.692	.643	1.000			
Social Relations	.734	.711	.426	1.000		
Decision Making	.747	.851	.596	.795	1.000	
Overall (TOTAL)	.922	.923	.752	.832	.906	1.000

p ($R \geq .320$) = .05

p ($R \geq .413$) = .01

This discussion will be followed by an investigation of the relationships between the independent and dependent variables using both Pearson product-moment correlations and multiple linear regression techniques. Then the relationships existing within the set of motivation variables will be explored utilizing Pearson product-moment correlations. Throughout the entire discussion, MUSs and NMUSs will be dealt with separately.

Independent Variables

Table X indicates that the only variables of organizational structure that were significantly related in MUSs were centralization and stratification. Almost 25 percent of the variance in one variable was explained by or contained within the other variable. The relationship was positive indicating that a MUS high in one variable was high in the other variable. All other combinations of independent variables were non-significantly related indicating a degree of linear independence between measures of organizational structure.

Table XI indicates that in NMUSs size and complexity were significantly and positively related. Large schools related to schools which had a high number of job specialists. Over twelve percent of one variable was explained by or contained within the other. Table XI also indicates a negative relationship between complexity and centralization which approaches significance. About nine per cent of the variance of each variable is shared. The

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variables of organizational structure in NMUSs, having only one significant relationship, were also relatively linearly independent of each other.

Independent and Dependent Variables

Motivation Related to Working Conditions

Table X indicates that size was significantly and negatively related to teacher motivation associated with working conditions. Large MUSs were low in motivation related to working conditions whereas small MUSs tended to be high in this motivational category. Almost fourteen percent of the variation in one variable was explained by the other. Table X also shows a negative relationship between centralization and working conditions which was nearly significant at the .05 level. MUSs high in centralization scored lower in motivation related to working conditions while MUSs low in centralization scored higher in this area of motivation.

Table XII indicates that in MUSs the number of staff members (size) was the most useful predictor of teacher motivation associated with working conditions. Size accounted for 13.8 percent of the variance in the working conditions variable. Centralization, while nearly significant by itself, did not yield significant information about motivation related to working conditions in MUSs over and above that given by school size.

Table XI indicates that centralization and stratification were both negatively and significantly related to teacher motivation

TABLE XII

ABILITY OF STRUCTURE VARIABLES TO PREDICT MOTIVATION RELATED TO WORKING CONDITIONS IN MULTIUNIT ELEMENTARY SCHOOLS

Step	R^2	R	Regression Coefficients of Structure Variables					Significance Level
			Size	Central	Complex	Formal	Strat	
1 *	.1376	.3709	-.3709					.0308
2	.2158	.4645	-.3318	-.2823				.0887
3	.2606	.5105	-.3671	-.2985	.2156			.1877
4	.3004	.5481	-.3358	-.3601	.2061	.2103		.2086
5	.3280	.5727	-.3542	-.2655	.2523	.2188	-.1989	.2937

*Variable entered into the regression equation at this step was significant at, or beyond, the .05 level.

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related to working conditions in NMUSs. NMUSs high in centralization and stratification were low in working condition motivation. Centralization accounted for over 35 percent of motivation related to working conditions in NMUSs while stratification explained only eleven percent of the same variable.

Table XIII shows that centralization was the only significant predictor of teacher motivation related to working conditions in NMUSs. Stratification, while a significant predictor in itself, did not add significantly to what could be predicted about motivation related to working conditions by centralization.

Motivation Related to Administration

Table X indicates that in NMUSs there was no significant relationship between any variable of organizational structure and teacher motivation related to administration.

Table XIV shows no variable of organizational structure in NMUSs as being a useful predictor of teacher motivation associated with administration types of rewards.

Table XI indicates that in NMUSs there was a significant relationship between teacher motivation associated with administration and the organizational structure variables of complexity, centralization, and stratification. High levels of motivation related to administration are associated with NMUSs which were high in complexity, low in centralization, or low in stratification. Centralization accounted for 29.4 percent of the motivation

TABLE XIII

ABILITY OF STRUCTURE VARIABLES TO PREDICT MOTIVATION RELATED TO WORKING CONDITIONS IN NON-MULTIUNIT ELEMENTARY SCHOOLS

Step	R^2	R	Regression Coefficients of Structure Variables					Significance Level
			Central	Formal	Size	Strat	Complex	
1 *	.3514	.5928	-.5928					.0001
2	.4072	.6383	-.6458	.2426				.0775
3	.4589	.6774	-.6317	.2396	.2273			.0811
4	.4956	.7040	-.5756	.1760	.2550	-.2073		.1304
5	.5017	.7083	-.5966	.1720	.2872	-.2246	-.0893	.5363

*Variable entered into the regression equation at this step was significant at, or beyond, the .05 level.

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TABLE XIV

ABILITY OF STRUCTURE VARIABLES TO PREDICT MOTIVATION RELATED TO ADMINISTRATION IN MULTIUNIT ELEMENTARY SCHOOLS

Step	R^2	R	Regression Coefficients of Structure Variables					Significance Level
			Strat	Complex	Size	Formal	Central	
1	.0799	.2827	-.2827					.1053
2	.1049	.3239	-.3261	.1640				.3592
3	.1406	.3750	-.3336	.1995	-.1920			.2732
4	.1526	.3907	-.3552	.1978	-.1802	.1123		.5266
5	.1692	.4113	-.2819	.1876	.1546	.1439	-.1547	.4616

variable while complexity explained 22.6 percent. Stratification explained 15.5 percent of the variance in the motivation associated with administration variable.

Table XV shows that in NMUSs centralization was the most significant predictor of administration motivation being able to account for 29.4 percent of the variable. Complexity, when added to the prediction equation, increased the amount explained by 11.6 percent bringing the total amount explained by centralization and complexity combined to 40.0 percent. The addition of stratification into the regression equation increased the variance explained to 46.3 percent. This increase of 6.3 percent approached significance. According to Table XV, NMUSs which displayed high complexity and low centralization and stratification had high levels of teacher motivation related to administrative rewards.

Motivation Related to Fringe Benefits

Table X shows no significant relationship between any variable of organizational structure and teacher motivation related to fringe benefits in MUSs.

Table XVI indicates that none of the variables of organizational structure were significant in predicting teacher motivation associated with fringe benefits in MUSs.

Table XI shows that in NMUSs both centralization and complexity related significantly to teacher motivation related to fringe benefits. High complexity related to high motivation and

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TABLE XV

ABILITY OF STRUCTURE VARIABLES TO PREDICT MOTIVATION RELATED TO ADMINISTRATION IN NON-MULTIUNIT ELEMENTARY SCHOOLS

Step	R^2	R	Regression Coefficients of Structure Variables					Significance Level
			Central	Complex	Strat	Size	Formal	
1 *	.2939	.5421	-.5421					.0004
2 *	.3999	.6324	-.4381	.3418				.0178
3 **	.4635	.6808	-.3984	.3057	-.2596			.0526
4	.4776	.6911	-.4015	.2550	-.2836	.1291		.3536
5	.4778	.6912	-.3978	.2543	-.2880	.1300	-.0138	.9203

*Variable entered into the regression equation at this step was significant at, or beyond, the .05 level.

**Stratification variable entered into the regression equation at this step was significant at the .0526 level.

TABLE XVI

ABILITY OF STRUCTURE VARIABLES TO PREDICT MOTIVATION RELATED TO FRINGE BENEFITS IN MULTIUNIT ELEMENTARY SCHOOLS

Step	R^2	R	Regression Coefficients of Structure Variables					Significance Level
			Formal	Size	Strat	Complex	Central	
1	.0756	.2750	-.2750					.1154
2	.1329	.3645	-.2509	.2405				.1626
3	.1783	.4222	-.2080	.2469	-.2172			.2080
4	.1887	.4344	-.2095	.2282	-.2453	.1080		.5448
5	.1929	.4392	-.2253	.2153	-.2820	.1131	.0774	.7075

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explained 11.2 percent of the dependent variable. High centralization related to low levels of motivation associated with fringe benefits and shared 20.9 percent of its variance with the motivation variable.

Table XVII indicates that in NMUS centralization was the best predictor of teacher motivation associated with fringe benefit rewards. Complexity, while it related highly to the dependent variable, was not able to add a significant amount of additional information to the prediction model in NMUSs.

Motivation Related to Social Relations

Table X indicates that stratification was significantly and negatively related to motivation associated with social relations in MUSs. MUSs high in stratification were low in motivation related to social relations while MUSs low in stratification scored higher in this area of motivation. Over sixteen percent of one variable was explained by the other variable.

Table XVII shows that stratification was the most useful predictor of motivation related to social relations in the MUS. The table also indicates that while complexity alone was not significantly related to motivation associated with social relations, its relationship approached significance when it was combined with stratification. Stratification accounted for sixteen percent of the motivation variable while stratification and complexity combined were able to account for over 25 percent of motivation related to social relations in the MUS.

TABLE XVII

ABILITY OF STRUCTURE VARIABLES TO PREDICT MOTIVATION RELATED TO FRINGE BENEFITS IN NON-MULTIUNIT ELEMENTARY SCHOOLS

Step	R^2	R	Regression Coefficients of Structure Variables					Significance Level
			Central	Complex	Formal	Strat	Size	
1 *	.2088	.4569	-.4569					.0039
2	.2507	.5007	-.3915	.2150				.1703
3	.2702	.5198	-.4236	.2121	.1427			.3485
4	.2799	.5291	-.4000	.1979	.1104	-.1069		.5075
5	.2805	.5296	-.4001	.1876	.1086	-.1124	.0263	.8736

*Variable entered into the regression equation at this step was significant at, or beyond, the .05 level.

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TABLE XVIII

ABILITY OF STRUCTURE VARIABLES TO PREDICT MOTIVATION RELATED TO SOCIAL RELATIONSHIPS IN MULTIUNIT ELEMENTARY SCHOOLS

Step	R^2	R	Regression Coefficients of Structure Variables					Significance Level
			Strat	Complex	Size	Formal	Central	
1 *	.16323	.4029	-.4029					.0181
2 **	.2520	.5020	-.4852	.3106				.0631
3	.2627	.5125	-.4811	.2912	.1047			.5162
4	.2704	.5200	-.4638	.2926	.0952	-.0901		.5838
5	.2716	.5212	-.4436	.2898	.1023	-.0814	-.0426	.8277

*Variable entered into the regression equation at this step was significant at, or beyond, the .05 level.

**Complexity variable entered into the regression equation at this step was significant at the .0631 level.

Table XI indicates that in the NMUS, three variables of organizational structure were significantly related to motivation concerned with social relationships. Complexity was positively related while centralization and stratification were negatively related. NMUSs which were high in complexity, low in centralization, and low in stratification were high in motivation related to social relations while NMUSs low in complexity, high in centralization, and high in stratification scored low in this motivational area. Considered independently, centralization accounted for 29 percent of the dependent variable while complexity accounted for 21 percent. Stratification shared 18.4 percent of its variance with motivation related to social relations.

Table XIX indicates that centralization was the most useful predictor of motivation related to social relations in NMUSs. Centralization was able to account for 29.1 percent of the dependent variable. Stratification, when added to centralization in the prediction model, raised the amount of shared variance a significant 10.9 percent. Although size was insignificant while acting alone, when combined with centralization and stratification, 49.7 percent of the dependent variable could be predicted.

Motivation Related to Decision Making

Table X indicates three independent variables which were significantly related to motivation due to teacher involvement in decision making in the NMUS. Stratification explained 25.9 percent

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TABLE XIX

ABILITY OF STRUCTURE VARIABLES TO PREDICT MOTIVATION RELATED TO SOCIAL RELATIONSHIPS IN NON-MULTIUNIT ELEMENTARY SCHOOLS

Step	R^2	R	Regression Coefficients of Structure Variables					Significance Level
			Central	Strat	Size	Complex	Formal	
1 *	.2914	.5398	-.5398					.0005
2 *	.4003	.6327	-.4741	-.3365				.0164
3 *	.4966	.7047	-.4472	-.3788	.3137			.0154
4	.5225	.7228	-.4018	-.3459	.2481	.1833		.1916
5	.5308	.7284	-.4280	-.3149	.2412	.1882	.0973	.4619

*Variable entered into the regression equation at this step was significant at, or beyond, the .05 level.

of the variance in motivation due to decision making while centralization explained 34.5 percent. Formalization, while significant, explained only 12.7 percent of the variance in the dependent variable. All three relationships were negative indications that as stratification, centralization, and formalization decreased, motivation related to teacher involvement in decision making increased.

Table XX shows that while stratification alone was able to explain 35.8 percent of the variation in motivation related to involvement in decision making, almost 47 percent of the variation could be explained by stratification and centralization working in conjunction with one another. The combination of stratification, centralization, and size accounted for 57 percent of the total variance in the decision making variable in multiunit schools. While formalization was significantly related to decision making, it did not explain a significant amount of additional variance when combined with stratification, centralization, and size.

Table XI indicates that within NMUSs, centralization explained 41.8 percent of the variance in motivation related to teacher involvement in decision making while stratification explained only 12.9 percent. Complexity, which was not significant in the MUSs, explained 18.5 percent of the variance in the NMUSs. Formalization was not significantly related to motivation related to teacher involvement in decision making in the NMUSs whereas there was a significantly relationship in the MUSs. Centralization and

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TABLE XX

ABILITY OF STRUCTURE VARIABLES TO PREDICT MOTIVATION RELATED TO DECISION MAKING IN MULTIUNIT ELEMENTARY SCHOOLS

Step	R^2	R	Regression Coefficients of Structure Variables					Significance Level
			Strat	Central	Size	Formal	Complex	
1 *	.3584	.5987	-.5987					.0002
2 *	.4698	.6854	-.4073	-.3847				.0159
3 *	.5721	.7564	-.3818	-.4423	.3237			.0119
4	.5898	.7680	-.3727	-.4053	.3044	-.1405		.2714
5	.5940	.7707	-.3931	-.3995	.2917	-.1427	.0681	.5966

*Variable entered into the regression equation at this step was significant at, or beyond, the .05 level.

stratification related negatively to the dependent variable indicating that high motivation scores would be characteristic of NMUS which were low in centralization and stratification. Complexity showed a positive relationship indicating that NMUSs having a high number of job specialities would also have high motivation related to teacher involvement in decision making.

Table XXI indicates that while centralization explained 41.9 percent of the variation in the dependent variable, 47.8 percent could be explained when both centralization and complexity were utilized in the prediction equation. NMUSs which report high motivation due to involvement in decision-making are low in centralization and high in organizational complexity. Stratification, while significant by itself, was not able to add significantly to the prediction when included with centralization and complexity.

Total Motivation

Table X indicates that both centralization and stratification were significantly and negatively related to total teacher motivation in MUSs. When overall motivation was considered, MUSs which were high in centralization and stratification were low in teacher motivation while high teacher motivation was associated with MUSs which were low in centralization and stratification. Stratification was able to account for about 18 percent of total teacher motivation while centralization accounted for almost 17 percent of this motivational category.

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TABLE XXI

ABILITY OF STRUCTURE VARIABLES TO PREDICT MOTIVATION RELATED TO DECISION MAKING IN NON-MULTIUNIT ELEMENTARY SCHOOLS

Step	R^2	R	Regression Coefficients of Structure Variables					Significance Level
			Central	Complex	Strat	Size	Formal	
1 *	.4185	.6469	-.6469					.0000
2 **	.4780	.6914	-.5688	.2565				.0532
3	.5206	.7215	-.5364	.2270	-.2119			.0919
4	.5363	.7323	-.5397	.1733	-.2374	.1366		.2982
5	.5448	.7381	-.5667	.1783	-.2056	.1296	.1001	.4423

*Variable entered at this step of the regression equation was significant at, or beyond, the .05 level.

**Complexity variable entered into the regression equation at this step was significant at the .0532 level.

Table XXII indicates that stratification was the most useful variable of organizational structure for predicting total teacher motivation in the NUS. Stratification was able to account for 18 percent of the motivation variable by itself. The addition of centralization, a variable which was significant alone, did not increase significantly, the amount of variance explained by stratification alone.

Table XI indicates that in the NMUS, three variables were significantly related to overall or total teacher motivation. Complexity was positively related to total motivation while centralization and stratification were negatively related to total teacher motivation. NMUSs which were high in complexity but low in centralization and stratification reported high teacher motivation. NMUSs reporting low teacher motivation were characterized by low complexity, high centralization, and high stratification. Centralization was able to account for over 40 percent of the variance in total teacher motivation while complexity accounted for almost 18 percent and stratification over 16 percent.

Table XXIII shows that three variables were significant in helping predict total teacher motivation in NMUSs. Centralization was the most useful variable of organization structure in that it was able to explain 40.2 percent of the variance in total teacher motivation by itself. The addition of stratification to the prediction model increased the amount of explained variance another 8.1

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TABLE XXII

ABILITY OF STRUCTURE VARIABLES TO PREDICT TOTAL TEACHER MOTIVATION IN MULTIUNIT ELEMENTARY SCHOOLS

Step	R^2	R	Regression Coefficients of Structure Variables					Significance Level
			Strat	Complex	Central	Size	Formal	
1 *	.1800	.4243	-.4243					.0124
2	.2453	.4953	-.4945	.2648				.1118
3	.2932	.5415	-.3664	.2557	-.2526			.1640
4	.3123	.5588	-.3854	.2829	-.2261	-.1421		.3778
5	.3176	.5636	-.3897	.2804	-.2467	-.1310	.0776	.6408

*Variable entered into the regression equation at this step was significant at, or beyond, the .05 level.

TABLE XXIII

ABILITY OF STRUCTURE VARIABLES TO PREDICT TOTAL TEACHER MOTIVATION IN NON-MULTIUNIT ELEMENTARY SCHOOLS

Step	R^2	R	Regression Coefficients of Structure Variables					Significance Level
			Central	Strat	Size	Complex	Formal	
1 *	.4016	.6337	-.6337					.0000
2 *	.4833	.6952	-.5768	-.2915				.0244
3 *	.5494	.7412	-.5545	-.3265	.2596			.0324
4	.5630	.7503	-.5215	-.3026	.2119	.1332		.3185
5	.5718	.7562	-.5490	-.2702	.2047	.1383	.1019	.4199

*Variable entered into the regression equation at this step was significant at, or beyond, the .05 level.

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percent to 48.3 percent. Although size was not significant by itself, it added a significant amount of information when combined with centralization and stratification. Together, centralization, stratification, and size accounted for 54.9 percent of the total teacher motivation variable in NMUSs.

Summary of Relationships

Table XXIV indicates that size was useful in predicting teacher motivation related to working conditions and teacher involvement in decision making in MUSs. Table XXIV shows size as being a useful predictor of teacher motivation related to working conditions, social relations, and total motivation in NMUSs. Thus, both

> Hypothesis 7: There is no significant relationship between school size and teacher motivation in multiunit (MUS) elementary schools

and

> Hypothesis 12: There is no significant relationship between school size and teacher motivation in non-multiunit (NMUS) elementary schools

were rejected at the .05 level of significance.

Table XXIV indicates that complexity was not able to predict any variables of teacher motivation in MUSs. Table XXIV shows complexity as useful in predicting teacher motivation related to administration in NMUSs. Thus,

> Hypothesis 8: There is no significant relationship between the complexity of organization and teacher motivation in multiunit (MUS) elementary schools

could not be rejected at the .05 level of significance[5] while it was possible to reject

> Hypothesis 13: There is no significant relationship between the complexity of organization and teacher motivation in non-multiunit (NMUS) elementary schools

at the .05 level of significance.

Table XXIV indicates that centralization was useful in predicting teacher motivation related to decision making in MUSs. Table XXIV indicates that in NMUSs all categories of teacher motivation could be predicted by centralization except motivation related to working conditions. Thus, both

> Hypothesis 9: There is no significant relationship between perceived centralization of decision making and teacher motivation in multiunit (MUS) elementary schools

and

> Hypothesis 14: There is no significant relationship between perceived centralization of decision making and teacher motivation in non-multiunit (NMUS) elementary schools

were rejected at the .05 level of significance.

As indicated by Table XXIV, formalization was not useful in predicting motivation of any kind in either MUS or NMUS. Neither

> Hypothesis 10: There is no significant relationship between perceived formalization and teacher motivation in multiunit (MUS) elementary schools

nor

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[5] Hypothesis 8 could have been rejected at the .063 level of significance.

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Hypothesis 15: There is no significant relationship between perceived formalization and teacher motivation in non-multiunit (NMUS) elementary schools

could be rejected at the .05 level of significance.

Table XXIV indicates that stratification was useful in predicting motivation related to social relations, involvement in decision making, and overall or total motivation in MUSs. Stratification was useful in predicting motivation related to social relations and overall or total motivation in non-multiunit NMUSs. Both

Hypothesis 11: There is no significant relationship between perceived stratification and teacher motivation in multiunit (MUS) elementary schools

and

Hypothesis 16: There is no significant relationship between perceived stratification and teacher motivation in non-multiunit (NMUS) elementary schools

were rejected at the .05 level of significance.

Dependent Variables

Table X indicates that almost all of the relationships between the dependent variables were highly significant in MUSs. Relationships which were not significant at the .05 level included 1) working conditions with social relations, 2) working conditions with decision making, 3) administration with fringe benefits, and 4) fringe benefits with total or overall teacher motivation.

Table XI shows that in the NMUS all relationships between variables of teacher motivation were significant well beyond the .01 level indicating a high degree of dependence among variables.

Summary

This chapter consisted of two sections. The first section dealt with data related to a comparison of MUSs and NMUSs across all variables--both independent and dependent--as set forth in Hypotheses one (1) through six (6). The second section examined the relationships between the variables of organizational structure and teacher motivation--Hypotheses seven (7) through sixteen (16)--in both multiunit MUSs and NMUSs.

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CHAPTER IV

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

In this chapter a brief summary of the study is presented, followed by a summary of the findings and a presentation of the conclusions. The last section includes the implications of the study for theory, research, and administrative practice.

Summary of the Study

The study was conducted to seek insight into the question of what types of organizational variables influenced a teacher's motivation to perform. It also sought to determine what differences, if any, existed between the organizational structures of multiunit (MUS) and non-multiunit (NMUS) elementary schools.

The unit of analysis consisted of multiunit and non-multiunit elementary schools in the State of Wisconsin which employed ten or more staff members. Thirty-four multiunit and thirty-eight non-multiunit elementary schools actually participated. Within each school a sample of from ten to fifteen teachers was selected to provide the profile for the unit of analysis. School size along with four dimensions of Hage's[1] axiomatic theory of organizational structure served as independent variables of the study. The four dimensions of organizational structure were:

Complexity--the degree to which different skills are represented within the organization.

Centralization--the degree to which decision making is shared among members of the organization.

Formalization--the degree to which the organization tolerates variance in carrying out rules and regulations.

Stratification--the importance of rewards and how they are distributed within the organization.

Teacher motivation was operationalized in terms of Vroom's[2] and Porter and Lawlwer's[3] model of expectancy theory which indicates that motivation, or effort to perform, is a multiplicative function of the importance of a reward and the perceived probability of receiving that reward when appropriate effort is put forth.

Aiken and Hage[4] described two basic organizational models or configurations which lie at opposite ends of the organizational continuum. The dynamic model was characterized as being (1) high in complexity, (2) low in centralization, (3) low in formalization, and (4) low in stratification. The static model, on the other hand,

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[1] Jerald Hage, "An Axiomatic Theory of Organizations," in Fred D. Carver and Thomas J. Sergiovanni, (eds.), ORGANIZATIONS AND HUMAN BEHAVIOR: FOCUS ON SCHOOLS (New York: McGraw-Hill Book Co., 1969), pp. 91-110.

[2] Victor H. Vroom, WORK AND MOTIVATION (New York: John Wiley & Sons, Inc., 1964).

[3] Lyman W. Porter and Edward E. Lawler, III, MANAGERIAL ATTITUDES AND PERFORMANCE (Homewood, Illinois: Richard D. Irwin, Inc., 1968).

[4] Jerald Hage and Michael Aiken, SOCIAL CHANGE IN COMPLEX ORGANIZATIONS (New York: Random House, 1970).

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was (1) low in complexity, (2) high in centralization, (3) high in formalization, and (4) high in stratification.

The hypotheses generated for this study were to assist in answering the following major questions:

1. Is the organizational structure of the multiunit elementary school (MUS) significantly different from that of the non-multiunit elementary school (NMUS)?
2. Is the level of teacher motivation in the multiunit elementary school (MUS) significantly different than that of the non-multiunit elementary school (NMUS)?
3. Is there any significant relationship between the organizational variables of school size, complexity, centralization, formalization, and stratification and a teacher's motivation to perform?

Summary of Findings

The major findings of the study were as follows:

1. There were no significant differences between MUSs and NMUSs in the structured variables of school size, organizational complexity, and formalization.
2. There were significant differences between MUSs and NMUSs in the structured variables of centralization and stratification.
3. There were no significant differences between MUSs and NMUSs in teacher motivation related to working conditions and administration.

4. There were significant differences between MUSs and NMUSs in teacher motivation related to fringe benefits, social relations, involvement in decision making, and overall or total teacher motivation.

5a. In MUSs, school size was a significant predictor of teacher motivation related to working conditions and teacher involvement in decision making. Size was negatively related to motivation concerned with working conditions but positively related to motivation concerned with teacher involvement in decision making.

5b. In NMUSs, school size was a significant predictor of teacher motivation related to working conditions, social relations, and total teacher motivation. Size related negatively to motivation concerned with working conditions and positively to teacher motivation concerned with social relations and total motivation.

6a. In MUSs, complexity was not a significant predictor of any category of teacher motivation.

6b. In NMUSs, complexity was a significant predictor of teacher motivation related to administration. Organizational complexity related positively to this variable.

7a. In MUSs, centralization was a significant predictor of teacher motivation related to teacher involvement in decision making. Centralization related negatively to this variable.

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7b. In NMUSs, centralization was a significant predictor of teacher motivation related to administration, fringe benefits, social relationships, involvement in decision making, and overall or total teacher motivation. Centralization related negatively to all of these motivation categories.

8a. In MUSs, formalization was not a significant predictor of any aspect of teacher motivation.

8b. In NMUSs, formalization was not a significant predictor of any aspect of teacher motivation.

9a. In MUSs, stratification was a significant predictor of teacher motivation related to social relationships, involvement in decision making, and overall or total teacher motivation. Stratification related negatively to each of these motivation categories.

9b. In NMUSs, stratification was a significant predictor of teacher motivation related to social relationships and overall or total teacher motivation. Stratification related negatively to each of these motivation categories.

Conclusions

In this section, each of the variables of school size, complexity, centralization, formalization, stratification, and overall teacher motivation are discussed in terms of the major conclusions which might be drawn fromthe study.

School Size

The study revealed that there was no significant difference between MUSs and NMUSs in school size as measured by the number of staff members. This variable was defined in such a way as to exclude a high percentage of schools from the study, however. Table I indicates that 758 schools were eliminated from the study because they had fewer than ten staff members. These schools represented 44 percent of all public elementary schools in the State of Wisconsin. This was a large percentage to eliminate when attempting to use the variable of organizational size. If all 758 schools had had ten staff members (the highest possible number the eliminated schools could have had), the mean number of staff members for all NMUSs would have been about fourteen. When compared to the MUS mean of 20.4, the difference probably would have been significant.

Size related positively to motivation concerned with decision making in MUSs. As the staff became larger in the NMUSs, the ability of one person (usually the principal) to control all aspects of decision making became more difficult. This was not necessarily the case in MUSs because the team or unit remains about constant in size and each person's ability to influence decision making for his team is unimpaired. This organizational mechanism for teacher involvement in decision making is characteristic of MUSs.

Size was positively related to total teacher motivation and motivation concerned with social relationships in NMUSs. It seems

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reasonable that as the NMUS became larger in size, a situation would be created in which more social activities and contacts would be possible. The unitized structure of the MUS would probably not produce the same effects, however. As the MUS increased in size, the number of teams or units would also increase but each unit or primary work group would remain about the same size, thus keeping the number of social contacts within the work situation relatively constant.

Complexity

The study indicated no significant difference between MUSs and NMUSs in organizational complexity. It may be concluded that this variable was not useful in distinguishing school types.

Complexity was not a significant predictor of teacher motivation in MUSs although it approached significance (at the .0631 level) in predicting teacher motivation concerned with social relationships. It might be concluded that as the number of organizational specialists increased in MUSs, the number of social interactions outside the unit team and the motivation derived from these kinds of rewards increased. Increased organizational complexity in the MUS may result in the same kind of effect as increased organizational size in the NMUS. One explanation may be that as size increases, there is no need to relate outside of the unit team unless the unit team or individual is relating to a specialist--one who can satisfy a need (i.e. teach music) which cannot be satisfied by a unit team member.

Complexity was positively related to motivation concerned with administration and decision making in NMUSs. One conclusion which may be drawn is that as the number of specialists in the NMUS increases, the insecurity about administrators lessens and the teachers become more involved in decision making. One is unable to conclude a causal relationship between the variables but apparently complexity, motivation related to administration, and motivation related to teacher involvement in decision making were related in NMUSs. This is also indicated by information found in the NMUS correlation matrix depicted in Table XI.

Centralization

The study indicated a very significant difference between MUSs and NMUSs in centralization of decision making, thus making this variable very useful in distinguishing school types.

Centralization was negatively related to and a significant predictor of all motivation categories in NMUSs except motivation concerned with working conditions and motivation concerned with teacher involvement in decision making in MUSs. Since the reward items for the category of motivation related to decision making were defined in terms of centralization, it was not surprising that centralization be a predictor of this variable for both MUSs and NMUSs. The fact that centralization was not useful in predicting other motivation categories in MUSs but very useful in NMUSs would cause one to conclude that centralization was a key factor in

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explaining why teachers in NMUSs were less motivated to perform their jobs. One might also conclude that while teachers in MUSs were not deprived of the rewards available through working conditions, administration, fringe benefits, and social relationships, extreme centralization of decision making in NMUSs seemed to override the benefits and rewards available outside of the decision-making category of motivation.

Formalization

The study found no significant differences between MUSs and NMUSs in formalization nor was it useful in predicting any categories of teacher motivation. Either both types of schools allow a great deal of deviation in the following of rules and regulations or they both allow very little. Whichever is the case, both school types follow a similar pattern. Who was involved in making the rules (centralization) counted for much more in both MUSs and NMUSs than the degree to which the rules were carried out (formalization).

Stratification

The study showed that NMUSs were significantly more stratified then MUSs and, thus, stratification was a useful variable in distinguishing school types.

Stratification was a useful predictor of total teacher motivation and motivation related to social relationships in both MUSs and NMUSs. This would seem to indicate that much of the way in which rewards were important or were distributed was dependent

upon the social relationships of stratification. The fact that stratification was useful in predicting motivation concerned with administration in the NMUS and motivation related to decision making in the MUS would seem to indicate which social relationships were of greater importance in each school type--social relationships with both the administration and the teachers were more useful to the NMUS teacher while those more useful to the MUS teacher were the relationships connected with decision making unit or team. In either case, one might conclude that the teachers in both school types desire, respect, and foster the type of social relationships which might best be expected to yield them entrance to the decision-making process of the school.

Teacher Motivation

The study showed a significant difference between MUSs and NMUSs in overall or total teacher motivation. Although all variables of organizational structure except formalization were useful in predicting some aspect of teacher motivation, centralization and stratification were the most useful.

It should be noted that in multiple linear regression all variables of organizational structure were considered simultaneously. The best predictor was selected first, the predictor yielding the next greatest amount of information was sorted out next, and so on, until all six variables were listed in order of decending usefulness in predicting motivation. This did not mean that a particular

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variable might not have been a significant predictor of motivation if it had been tested by itself. It may well be that two variables had a great deal in common with one another. In that case, the variable which was the best predictor of the two was selected first. The second variable may have been significant by itself but because the regression model considered all variables together, the second variable may not have added enough additional information to the multiple regression equation to be labeled significant. The correlation matrix for each school type (Table X and Table XI) shows which variables may have had so much in common that one variable may have blocked other variables from being listed as significant predictors of teacher motivation.

Implications of the Study

The fact that school size was related negatively to motivation concerned with working conditions in both MUSs and NMUSs but positively related to other categories of teacher motivation was unusual in that it was the only variable of organizational structure which changed the direction in which it related to the dependent variables. It would seem that teachers, when concerned with working conditions, might prefer the smaller, more intimate situation typically produced by having a smaller staff. Larger staffs, on the other hand, seemed to provide better opportunities for social relationships and teacher involvement in decision making. These

unusual characteristics of school size deserve more study. Specific aspects which might be investigated would include (1) the optimum size for a MUS or NMUS and (2) which subcategories of teacher motivation under the influence of school size contribute most to overall teacher motivation.

There was no significant difference between MUSs and NMUSs in organizational complexity. At least two explanations exist for this result--(1) there really was no difference between the school types because the number of specialists needed to run an elementary school had been so affixed by state statutes, certification requirements, district policies, and student needs that little variability could be found between school types or (2) the smaller schools which might have been lower in complexity were eliminated from the study. In any case, the relationship deserves further study.

Another implication for future study lies in the seemingly complementary relationship between size and complexity for the different school types. Where size seemed to predict teacher motivation related to social relationships in NMUSs, complexity was close to being a significant predictor in MUSs. Complexity seemed to predict motivation related to decision making in NMUSs while size was the significant predictor in MUSs. Further investigation should be carried out to (1) determine if this complementary relationship is real or coincidental and (2) if it is real, what aspects of organizational structure would cause different variables to be more useful in predicting teacher motivation.

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Teacher motivation was divided into five subscales which seemed to relate quite well to existing theory. Maslow[5] described five basic levels of human needs. The motivation subscales utilized in this study closely parallelled the human needs hierarchy suggested by Maslow and may, in fact, be considered as an organizational analogy to the individual needs he described. The physiological needs of the individual represent a starting point for the individual upon which motivation builds.[6] In like manner, working conditions and certain administrative relationships are set for each teacher in a school before he starts to work. It was noted in the study that there was no significant difference between MUSs and NMUSs in the level of motivation related to these two subscales. Perhaps certain basics must exist in each situation before any motivation can develop. This notion would also lend support to the concept of hygienes--those job related situations or events which do not lead to job satisfaction but without which job satisfaction cannot be attained--as set forth by Herzberg.[7]

The safety needs set forth by Maslow were those needs which were generally concerned with the protection of the individual against threat, danger, and deprivation.[8] The fringe benefit

[5]Abraham H. Maslow, MOTIVATION AND PERSONALITY (New York: Harper & Row, 1954).

[6]Joseph Tiffin and Ernest J. McCormick, INDUSTRIAL PSYCHOLOGY (Englewood Cliffs, N.J., 1965), p. 341.

[7]Frederick Herzberg, et al., THE MOTIVATION TO WORK (New York: John Wiley and Sons, Inc., 1959).

[8]Tiffin and McCormick, op. cit., p. 341.

rewards of this study seem to carry out the same purpose for the individual teacher.

The social needs suggested by Maslow become important motivators of behavior when lower order needs have been satisfied.[9] These needs for belonging, association, love, and acceptance closely parallel the social relations rewards of this study.

The ego needs of self-esteem and status[10] can be easily met for the teacher by becoming involved in decision making. This involvement lets the teacher know that he is a part of the group, that his counsel is desired and respected, and that generally, he is a person of worth because he has something of importance to contribute.

This study did not uncover any rewards which might be analogous to Maslow's highest order of needs--self-fulfillment or self-actualization. Perhaps this is because these rewards must originate from within the individual and not from any outside source.

Future investigation in this area might attempt to (1) determine whether or not the subcategories of teacher motivation are, indeed, hierarchical in nature and (2) whether or not this hierarchy actually operates for organizations in a fashion similar to that of Maslow's hierarchy for individuals.

[9]Ibid., p. 341.

[10]Ibid., pp. 341-342.

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Table XXIV is a summary of some of the organizational structure information in Table VII. One will note that although some of the mean differences between school types were not significant, there was some evidence to indicate that the MUS tended toward Hage and Aiken's[11] dynamic model of organizations (high complexity; low centralization, formalization, and stratification) while the NMUS tended toward the static model (low complexity; high centralization, formalization, and stratification). Hage and Aiken[12] suggested that a dynamic organization was a response to an unstable environment;

TABLE XXIV

COMPARED DIFFERENCES
BETWEEN MUS AND NMUS

Variable	MUS	NMUS
Complexity	High	Low
Centralization[1]	Low	High
Formalization	Low	High
Stratification[1]	Low	High

[1]Differences between school types was significant beyond the .05 level

that once the organization reacted to the environment, it would tend to approach the static model. The unitized organization of the MUS

[11]Hage and Aiken, op. cit., pp. 62-91.

[12]Ibid., pp. 71-74.

may tend to compensate for this tendency of the organization to revert to the static model. Although this point needs further study, the fact remains that the MUS had significantly greater teacher motivation than the NMUS. This point not only deserves greater research but immediate consideration by practicing administrators interested in developing higher levels of teacher motivation and performance of their staff members. This author suggests that administrators take direct steps to implement at least those characteristics of the dynamic model which this study has shown to have a significant relationship to teacher motivation. Every attempt should be made to decentralize the school by involving teachers in decision making to the greatest possible extent. In addition, destratification of the school must be accomplished by demonstrating that rewards, special favors, and privileges can indeed be distributed fairly and justly. It should be observed that it is possible for a principal to implement these suggested changes in his school without permission from the superintendent of schools, without increased fiscal commitment, and without waiting until next year!

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APPENDIX A

COVER LETTER TO PRINCIPALS

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UNIVERSITY OF WISCONSIN-MADISON
DEPARTMENT OF EDUCATIONAL ADMINISTRATION

Educational Sciences Building
1025 West Johnson Street
Madison, WI 53706
Telephone (608)

May, 1972

Dear Principal:

Thank you very much for agreeing to participate in our research study involving organizational structure and teacher motivation. Your assistance in the project is most appreciated as it is vital in assuring our success.

Enclosed you will find a list of the professional staff members who are to receive the questionnaires, several envelopes containing the questionnaires, a return envelope, and a short check-list on organizational complexity for you to complete. The following steps should be taken to assure the greatest success with the least amount of wasted time and energy.

1. Distribute the envelopes containing the questionnaires to the listed staff members.

2. Complete the check-list for organizational complexity.

3. Collect the completed questionnaires from each of the staff members on your list.

4. Return the completed staff questionnaires and the complexity check-list using the enclosed self-addressed, stamped envelope.

Please encourage each staff member to complete the questionnaire and return it to you for mailing as soon as possible. Thanks again for your cooperation.

Sincerely yours,

H. Scott Herrick, Researcher
Educational Administration
University of Wisconsin
Madison, Wisconsin 53706
608 263-2723

James M. Lipham, Professor
Educational Administration
University of Wisconsin
Madison, Wisconsin 53706
608 263-2713

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APPENDIX B

ORGANIZATIONAL COMPLEXITY CHECK-LIST

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Organizational Complexity

To be completed by the building principal.

Below is a list of occupational specialties which might be found in an elementary school. Place a check mark after the occupational specialties which are found in your school and which have qualified people working in the specialty at least 10 hours per week.

District, CESA, and county personnel may also be counted provided they meet the above criteria.

Administrative Staff

- Principal ___
- Assistant Principal ___
- Director of Elementary Education ___
- Supervisor (Curriculum and/or Instruction ___
- Administrative Intern ___
- Other (Specify) ___

Teaching Staff

- Unit or Team Leader ___
- Classroom Teacher ___
- Librarian ___
- Physical Education ___
- Music ___
- Art ___
- Special Education ___
- Physical or Mental Retardation ___
- Teacher Intern ___
- Practice Teacher ___
- Substitute Teacher (Need not work 10 hours per week) ___
- Instructional Aide ___
- Other (Specify) ___

Pupil Personnel Staff

- Guidance Counselor ___
- School Psychologist ___
- Social Worker ___
- School Nurse ___
- Speech Therapist ___
- Special Learning Disabilities ___
- Attendance Officer ___
- Remedial Reading ___
- Remedial Math ___
- Other (Specify) ___

Auxiliary Staff

- School Secretary ___
- Teacher Secretary (Clerical Aide) ___
- Lay Supervisor (Paid) ___
- Lay Volunteer (Unpaid) ___
- Custodian ___
- Cook ___
- Bus Driver ___
- Audio-Visual ___
- Other (Specify) ___

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APPENDIX C

TEACHER QUESTIONNAIRE

UNIVERSITY OF WISCONSIN-MADISON
DEPARTMENT OF EDUCATIONAL ADMINISTRATION

Educational Sciences Building
1025 West Johnson Street
Madison, WI 53706
Telephone (608)

May, 1972

Dear Teacher:

Your school has agreed to cooperate in a study regarding the relationship between organizational structure and teacher motivation. The attached questionnaire contains questions which attempt to measure these concepts. Please complete the questionnaire to the best of your ability according to the directions for each section.

We realize that your time is precious and not to be wasted. Therefore, we have attempted to develop a questionnaire which can be completed in as short a time as possible and still measure all of the constructs which are important to our study. We realize that some of the items may be unclear to you but try to answer each one. Please do not leave questions unanswered as they will distort the results of the questions you have taken the time to answer.

After completing the questionnaire, seal it in the envelope provided and return it to your principal for batch mailing back to us. Your responses will be held in strictest confidence. Thanks again for your cooperation.

Sincerely yours,

H. Scott Herrick, Researcher
Educational Administration
University of Wisconsin
Madison, Wisconsin 53706
608 263-2723

James M. Lipham, Professor
Educational Administration
University of Wisconsin
Madison, Wisconsin 53706
608 263-2713

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Centralization Scale

Directions: Circle the most appropriate answer to each of the following questions.

How frequently do you participate in decisions concerning...

	Almost Always	Often	Some-times	Seldom	Almost Never
1. the hiring of new staff members for the school?	1	2	3	4	5
2. the development of the school budget?	1	2	3	4	5
3. recommendations for the adoption of new curricular or instructional programs?	1	2	3	4	5
4. work procedures to be followed by the school staff?	1	2	3	4	5
5. room assignments, allocation of aides, etc.?	1	2	3	4	5
6. school policy or philosophy?	1	2	3	4	5
7. the evaluation of other staff members?	1	2	3	4	5
8. recommendations for new school plants and facilities being planned?	1	2	3	4	5
9. your own work assignments?	1	2	3	4	5
10. how a specific job or task is to be handled?	1	2	3	4	5
11. the selection of materials to be used in the classroom?	1	2	3	4	5
12. the development of the pupil progress reporting system?	1	2	3	4	5

Formalization Scale

Directions: Circle the answer which best describes your feelings regarding each statement.

	Definitely True				Definitely False
13. School work rules and procedures are explicitly defined	1	2	3	4	5
14. Going through proper channels is constantly stressed.	1	2	3	4	5

	Definitely True				Definitely False
15. Everyone is expected to strictly follow rules and procedures.	1	2	3	4	5
16. Teachers in the school are frequently chided for violating rules and procedures.	1	2	3	4	5
17. Teachers find themselves hindered from doing their job by rules and regulations.	1	2	3	4	5
18. Teachers seldom work around the rules -- even when it is in the interest of the school.	1	2	3	4	5

Stratification Scale

Directions: Circle the answer which best describes your feelings regarding each statement.

Some teachers...

	Definitely True				Definitely False
19. get first choice of instructional materials.	1	2	3	4	5
20. have fewer duties than others.	1	2	3	4	5
21. are not required to follow the rules and procedures as closely as others.	1	2	3	4	5
22. are assigned better teaching facilities.	1	2	3	4	5
23. have more say regarding school policy.	1	2	3	4	5
24. have more status than others.	1	2	3	4	5
25. have a closer relationship with the administration.	1	2	3	4	5
26. are more able to get what they want into the school budget.	1	2	3	4	5
27. are more readily accepted by their peers than others.	1	2	3	4	5
28. are allowed to spend more school money than others.	1	2	3	4	5

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	Definitely True				Definitely False
29. are more sought after and respected by parents than others.	1	2	3	4	5
30. have more prestige than others.	1	2	3	4	5

Motivation and Reward Scale

Directions: Below is a list of possible rewards which might come to a teacher as a result of teaching. Please circle the answer which best describes how important each reward is to you and the likelihood of receiving the reward in your present teaching situation. Be sure to respond to both aspects of each reward.

Possible rewards of teaching.	Importance of the reward.					Likelihood of getting reward.				
	Very Unimportant		Not Important or Unimportant		Very Important	Very Unlikely		50-50 Chance		Very Likely
31. Freedom to experiment in your own classroom.	1	2	3	4	5	1	2	3	4	5
32. Getting together socially with school people after hours.	1	2	3	4	5	1	2	3	4	5
33. A retirement plan beyond what the state provides.	1	2	3	4	5	1	2	3	4	5
34. Supervisor praise of your teaching achievements.	1	2	3	4	5	1	2	3	4	5
35. Living close to school.	1	2	3	4	5	1	2	3	4	5
36. An adequate sick leave program.	1	2	3	4	5	1	2	3	4	5
37. A chance to work towards personal goals while in your present position.	1	2	3	4	5	1	2	3	4	5
38. Facilities which are not overcrowded.	1	2	3	4	5	1	2	3	4	5
39. Modern teaching facilities.	1	2	3	4	5	1	2	3	4	5
40. Teaching in a school with a good academic reputation.	1	2	3	4	5	1	2	3	4	5

Possible rewards of teaching.	Importance of the reward.					Likelihood of getting reward.				
	Very Unimportant		Not Important or Unimportant		Very Important	Very Unlikely		50-50 Chance		Very Likely
41. Less time in formal teaching situations.	1	2	3	4	5	1	2	3	4	5
42. Community recognition of your service to public education.	1	2	3	4	5	1	2	3	4	5
43. Intellectual stimulation from teaching.	1	2	3	4	5	1	2	3	4	5
44. Class sizes as small as you would like them.	1	2	3	4	5	1	2	3	4	5
45. Utilization of staff in-put in the making of school policy.	1	2	3	4	5	1	2	3	4	5
46. A clear and definite policy regarding teacher evaluation.	1	2	3	4	5	1	2	3	4	5
47. Opportunity to influence school policy.	1	2	3	4	5	1	2	3	4	5
48. A salary schedule which recognizes teacher competency.	1	2	3	4	5	1	2	3	4	5
49. A physically comfortable school environment.	1	2	3	4	5	1	2	3	4	5
50. An innovative school administration.	1	2	3	4	5	1	2	3	4	5
51. Equitable assignment of teachers to classrooms.	1	2	3	4	5	1	2	3	4	5
52. Being able to meet your student's needs.	1	2	3	4	5	1	2	3	4	5
53. Opportunity to help determine school policy.	1	2	3	4	5	1	2	3	4	5
54. Instructional equipment available when required.	1	2	3	4	5	1	2	3	4	5
55. Knowing what is "going on" in the school.	1	2	3	4	5	1	2	3	4	5

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Possible rewards of teaching.	Importance of the reward.			Likelihood of getting reward.		
	Very Unimportant	Not Important or Unimportant	Very Important	Very Unlikely	50-50 Chance	Very Likely
56. Having faculty members in your school with whom you share many common interests.	1 2	3	4 5	1 2	3	4 5
57. An attractive school campus.	1 2	3	4 5	1 2	3	4 5
58. Respect from the students in your classes.	1 2	3	4 5	1 2	3	4 5
59. Desirable working conditions.	1 2	3	4 5	1 2	3	4 5
60. Opportunity to teach in your major area of interest.	1 2	3	4 5	1 2	3	4 5
61. Opportunities for advancement within the school district.	1 2	3	4 5	1 2	3	4 5
62. A community which shows an interest in its school system.	1 2	3	4 5	1 2	3	4 5
63. District goals which are similar to your own.	1 2	3	4 5	1 2	3	4 5
64. A community which recognizes and appreciates its teachers.	1 2	3	4 5	1 2	3	4 5
65. A medical plan which meets the needs of you and your family.	1 2	3	4 5	1 2	3	4 5
66. Classrooms which are equipped to facilitate the instructional process.	1 2	3	4 5	1 2	3	4 5
67. Less administrative paperwork as a part of your responsibilities.	1 2	3	4 5	1 2	3	4 5
68. Recognition by the administration for outstanding achievements.	1 2	3	4 5	1 2	3	4 5
69. Opportunity to discuss problems with administrative personnel.	1 2	3	4 5	1 2	3	4 5
70. A generous sabbatical leave plan.	1 2	3	4 5	1 2	3	4 5
71. Adequate time alloted within the school day for class preparation.	1 2	3	4 5	1 2	3	4 5

Possible rewards of teaching.	Importance of the reward.			Likelihood of getting reward.		
	Very Unimportant	Not Important or Unimportant	Very Important	Very Unlikely	50-50 Chance	Very Likely
72. Support for your teaching stle from the community.	1 2	3	4 5	1 2	3	4 5
73. Being judged an effective teacher by your peers.	1 2	3	4 5	1 2	3	4 5
74. Having your supervisor do things the way you would like.	1 2	3	4 5	1 2	3	4 5
75. Respect of others for being a member of a profession.	1 2	3	4 5	1 2	3	4 5
76. Adequate custodial services available in your school.	1 2	3	4 5	1 2	3	4 5
77. Doing as good a job of teaching as you can.	1 2	3	4 5	1 2	3	4 5
78. Having district policies implemented in accordance with your thinking.	1 2	3	4 5	1 2	3	4 5
79. Teaching the material you would like to teach.	1 2	3	4 5	1 2	3	4 5
80. Being judged an effective teacher by your principal.	1 2	3	4 5	1 2	3	4 5
81. Opportunity to interact socially with administrative personnel.	1 2	3	4 5	1 2	3	4 5
82. Teaching the type of students you most enjoy.	1 2	3	4 5	1 2	3	4 5
83. A feeling of trust for the administration.	1 2	3	4 5	1 2	3	4 5
84. Participation in school policy decision making.	1 2	3	4 5	1 2	3	4 5
85. High job security.	1 2	3	4 5	1 2	3	4 5
86. Chance to influence the making of important school decisions.	1 2	3	4 5	1 2	3	4 5

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Possible rewards of teaching.	Importance of the reward.			Likelihood of getting reward.		
	Very Unimportant	Not Important or Unimportant	Very Important	Very Unlikely	50-50 Chance	Very Likely
87. Opportunity to fulfill the emotional needs of your students.	1 2 3 4 5			1 2 3 4 5		
88. Faculty meetings which provide a chance to influence school policy.	1 2 3 4 5			1 2 3 4 5		
89. Social get-togethers with other faculty members.	1 2 3 4 5			1 2 3 4 5		
90. Fair and just treatment from administrators.	1 2 3 4 5			1 2 3 4 5		
91. Chances for regular pay increases.	1 2 3 4 5			1 2 3 4 5		
92. High prestige in your community.	1 2 3 4 5			1 2 3 4 5		
93. An adequate salary schedule.	1 2 3 4 5			1 2 3 4 5		
94. Acceptance by other faculty members.	1 2 3 4 5			1 2 3 4 5		
95. Fewer supervisory duties outside of the regular teaching situation.	1 2 3 4 5			1 2 3 4 5		
96. Being in agreement with district policy.	1 2 3 4 5			1 2 3 4 5		
97. Peer praise for your professional achievements.	1 2 3 4 5			1 2 3 4 5		
98. A cooperative school administration.	1 2 3 4 5			1 2 3 4 5		
99. Income supplements for extra services rendered.	1 2 3 4 5			1 2 3 4 5		
100. Having the administration trust you to do the job right.	1 2 3 4 5			1 2 3 4 5		

Please check to make sure you have answered all of the items. Seal the questionnaire in the envelope provided and return it to your principal for batch mailing back to us. Thank you very much!

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APPENDIX D

FOLLOW-UP LETTER

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UNIVERSITY OF WISCONSIN-MADISON
DEPARTMENT OF EDUCATIONAL ADMINISTRATION

Educational Sciences Building
1025 West Johnson Street
Madison, WI 53706
Telephone (608)

Dear Principal:

I received the questionnaires from your school but the Complexity check-list was not included with them. Please fill out the enclosed check-list and return in the envelope provided.

Thank you very much for your cooperation.

H. Scott Herrick
Educational Administration
University of Wisconsin
Madison, Wisconsin 53706
608 263-2723

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APPENDIX E

DEVELOPMENT OF THE TEACHER
MOTIVATION SUBSCALES

DEVELOPMENT OF THE TEACHER
MOTIVATION SUBSCALES

Background

The list of possible rewards for teachers used as the basis for the motivation scale was developed from Spuck's[1] Teacher Reward and Satisfaction Scales (TRASS). Spuck constructed his liste from reward categories originally developed by Barnard[2] but which later were extended to include the constructs of Maslow,[3] Katz and Kahn,[4] and Lortie.[5] Spuck's final list of rewards were factor analyzed and reduced to the following eight homogeneous reward scales:

1. Material Inducements (Monetary Rewards)
2. Support and Recognition of Community
3. Physical Conditions
4. Pride of Workmanship
5. Social Relations With Peers
6. Agreement with District Goals and Policy
7. Ability to Influence School Policy
8. Environmental Working Conditions[6]

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[1]Dennis W. Spuck, "Reward Structures in Public High Schools," (unpublished Doctoral dissertation, Claremont Graduate School, Claremont, California, 1970), pp. 200-229.

[2]C. I. Barnard, THE FUNCTIONS OF THE EXECUTIVE (Cambridge: Howard University Press, 1938).

[3]Abraham H. Maslow, "A Theory of Human Motivation," THE PSYCHOLOGICAL REVIEW, 50 (1943).

[4]Daniel Katz and Robert Kahn, THE SOCIAL PSYCHOLOGY OF ORGANIZATIONS (New York: John Wiley, 1966).

[5]D. C. Lortie, "The Balance of Control and Autonomy in Elementary School Teaching," in Amitai Etzioni, ed., THE SEMI-PROFESSIONALS AND THEIR ORGANIZATION (New York: The Free Press, 1969).

[6]Spuck, op. cit., Appendix B.

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Spuck's list of rewards were originally administered to secondary school teachers but for this study were modified to conform to the elementary school situation.

Table I lists the possible rewards which might be available to teachers in elementary schools.

Administration of the Instrument

Each teacher was asked to determine for himself the importance of each reward and the possibility of receiving the reward if his teaching performance was acceptable. These two questions were scored for each reward using five-point scales. The answers were multiplied according to the constructs of Vroom[7] to determine a motivation score for each reward.

Analysis of the Instrument

The motivation scores for each reward were submitted to factor analysis using program BIGFACT[8] to reduce the list of items to a small number of homogeneous groups. The seventy reward items reduced to five[9] meaningful subcategories, each of which represented a source

[7]Victor H. Vroom, WORK AND MOTIVATION (New York: John Wiley, 1964).

[8]Dennis W. Spuck and Donald N. McIsaac, "Program BIGFACT," (unpublished paper, Wisconsin Information Systems for Education, University of Wisconsin, Madison, Wisconsin, 1972).

[9]The analysis included work on as many as ten factors but five factors came together best. The criteria were to have as few "stray" items as possible in each category while not having separate groups representing the same construct.

from which teacher motivation might be derived. Table II shows the rotated factor matrix for the five factors while Table IV indicates the reordered grouping of rewards. Table III indicates the eigenvalues for the five rotated factors.

Definition of Scales

The factors were examined to determine the construct common to the possible rewards within each subcategory. The major thrust of each subcategory is given below.

Subcategory 1 - Teacher Motivation Related to Working Conditions

The twenty-two items in this group reflect many conditions set forth in most negotiated agreements. They are the type of rewards which are settled, for the most part, before a teacher ever starts to work and thus, are not performance related. These rewards seemed to relate closely to Maslow's[10] physiological or basic needs upon which his hierarchy of needs is built.

Subcategory 2 - Teacher Motivation Related to Administration

This scale's eighteen items reflect the same type of needs mentioned above except these rewards are, for the most part, under the control of the school's building, central office, or school board administration.

Subcategory 3 - Teacher Motivation Related to Fringe Benefits

The ten items in this category reflect the type of rewards which are usually over and above the negotiated agreement but which

[10]Joseph Tiffin and Ernest McCormick, INDUSTRIAL PSYCHOLOGY (Englewood Cliffs: Prentice Hall, 1965), p. 341.

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if bestowed upon a teacher, would have a tendency to make him feel he would be able to succeed in his assigned task. Having "small classes" and "planning time during the school day" would allow a teacher to feel that he had a definite edge against failure. This category relates closely to the safty needs of Maslow's[11] hierarchy.

Subcategory 4 - Teacher Motivation Related to Social Relationships

This scale consists of eleven items which reflect the social relationships and interactions which seemed important to teachers. Several items refer to teacher-student relationships and teacher-administrator relationships but the majority of items depicted teacher-teacher social relationships. This subcategory relates well to the social needs portion of Maslow's[12] hierarchy.

Subcategory 5 - Teacher Motivation Related to Teacher Involvement in Decision Making

These nine items reflect the degree of involvement or influence teachers might desire to achieve in the decision making process. The self-esteem and status teachers may experience seemed to be a well defined motivation subcategory which relates well to that portion of Maslow's[13] hierarchy dealing with ego needs. Involvement in a decision making process is one way teachers may satisfy this need.

---

[11] Ibid., p. 341.

[12] Ibid., p. 341.

[13] ibid., pp. 341-342.

TABLE I

POSSIBLE REWARDS AVAILABLE TO TEACHERS

Item	Possible Rewards
1.	Freedom to experiment in your own classroom.
2.	Getting together socially with school people after hours.
3.	A retirement plan beyond what the state provides.
4.	Supervisor praise of your teaching achievements.
5.	Living close to school.
6.	An adequate sick leave program.
7.	A chance to work towards personal goals while in your present position.
8.	Facilities which are not overcrowded.
9.	Modern teaching facilities.
10.	Teaching in a school with a good academic reputation.
11.	Less time in formal teaching situations.
12.	Community recognition of your service to public education.
13.	Intellectual stimulation from teaching.
14.	Class sizes as small as you would like them.
15.	Utilization of staff in-put in the making of school policy.
16.	A clear and definite policy regarding teacher evaluation.
17.	Opportunity to influence school policy.
18.	A salary schedule which recognizes teacher competency.
19.	A physically comfortable school environment.
20.	An innovative school administration.

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TABLE I
(continued)

POSSIBLE REWARDS AVAILABLE TO TEACHERS

Item	Possible Rewards
21.	Equitable assignment of teachers to classrooms.
22.	Being able to meet your students' needs.
23.	Opportunity to help determine school policy.
24.	Instructional equipment available when required.
25.	Knowing what is "going on" in the school.
26.	Having faculty members in your school with whom you share many common interests.
27.	An attractive school campus.
28.	Respect from the students in your classes.
29.	Desirable working conditions.
30.	Opportunity to teach in your major area of interest.
31.	Opportunities for advancement within the school district.
32.	A community which shows an interest in its school system.
33.	District goals which are similar to your own.
34.	A community which recognizes and appreciates its teachers.
35.	A medical plan which meets the needs of you and your family.
36.	Classrooms which are equipped to facilitate the instructional process.
37.	Less administrative paperwork as a part of your responsibilities.
38.	Recognition by the administration for outstanding achievements.
39.	Opportunity to discuss problems with administrative personnel.
40.	A generous sabbatical leave plan.

TABLE I
(continued)

POSSIBLE REWARDS AVAILABLE TO TEACHERS

Item	Possible Rewards
41.	Adequate time alloted within the school day for class preparation.
42.	Support for your teaching style from the community.
43.	Being judged an effective teacher by your peers.
44.	Having your supervisor do things the way you would like.
45.	Respect of others for being a member of a profession.
46.	Adequate custodial services available in your school.
47.	Doing as good a job of teaching as you can.
48.	Having district policies implemented in accordance with your thinking.
49.	Teaching the material you would like to teach.
50.	Being judged an effective teacher by your principal.
51.	Opportunity to interact socially with administrative personnel.
52.	Teaching the type of students you most enjoy.
53.	A feeling of trust for the administration.
54.	Participation in school policy decision making.
55.	High job security.
56.	Chance to influence the making of important school decisions.
57.	Opportunity to fulfill the emotional needs of your students.
58.	Faculty meetings which provide a chance to influence school policy.
59.	Social get-togethers with other faculty members.
60.	Fair and just treatment from administrators.
61.	Chances for regular pay increases.

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TABLE I
(continued)

POSSIBLE REWARDS AVAILABLE TO TEACHERS

Item	Possible Rewards
62.	High prestige in your community.
63.	An adequate salary schedule.
64.	Acceptance by other faculty members.
65.	Fewer supervisory duties outside of the regular teaching situation.
66.	Being in agreement with district policy.
67.	Peer praise for your professional achievements.
68.	A cooperative school administration.
69.	Income supplements for extra services rendered.
70.	Having the administration trust you to do the job right.

TABLE II

ROTATED FACTOR MATRIX FOR FIVE FACTORS
AND ITEM COMMUNALITIES

	Factor					
Item	One	Two	Three	Four	Five	Commu-nality
1	.375	.002	.013	.168	-.287	.251
2	.262	.149	.016	.532	-.197	.414
3	.117	.064	.364	.115	-.127	.180
4	.307	-.137	.260	.192	-.318	.319
5	.166	-.060	-.129	.094	.190	.093
6.	.529	-.210	-.077	.057	-.055	.335
7	.462	-.119	.086	.155	-.227	.310
8	.323	-.108	.476	-.038	-.057	.348
9	.595	-.098	.218	.006	.031	.412
10	.536	-.119	.266	.168	.048	.403
11	.034	.138	.389	.263	-.149	.262
12	-.121	-.061	.615	.277	-.080	.480
13	.631	-.151	-.072	.075	-.120	.446
14	.085	-.055	.590	.045	-.120	.375
15	.178	-.134	.412	.111	-.594	.585
16	.529	-.172	.021	.007	-.387	.459
17	.256	-.147	.248	.143	-.641	.580
18	.103	-.091	.475	.087	-.160	.278
19	.683	-.161	.182	.060	-.029	.530
20	.518	-.217	.294	.066	-.282	.485
21	.593	-.186	.171	.056	-.204	.460
22	.536	-.090	.188	.119	-.156	.369
23	.273	-.143	.305	.136	-.662	.645
24	.610	-.124	.016	-.023	-.119	.402
25	.355	-.182	.289	.232	-.356	.423
26	.248	.045	.297	.499	-.065	.405
27	.573	-.099	.111	.222	.047	.401
28	.532	-.164	-.050	.120	-.046	.329
29	.551	-.196	.274	.094	-.072	.431
30	.561	-.188	-.124	.094	.014	.374
31	.276	-.149	.310	.232	-.144	.269
32	.542	-.237	.226	.065	-.018	.405
33	.349	-.230	.427	.153	-.072	.386
34	.452	-.328	.297	.065	-.014	.405
35	.377	-.226	.283	.043	-.032	.276

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TABLE II
(continued)

ROTATED FACTOR MATRIX FOR FIVE FACTORS
AND ITEM COMMUNALITIES

Item	Factor One	Factor Two	Factor Three	Factor Four	Factor Five	Communality
36	.317	-.405	.301	.185	-.0[illegible]	.390
37	.107	-.355	.227	.133	-.052	.209
38	.340	-.391	.059	.112	-.249	.346
39	.313	-.493	.073	.078	-.308	.447
40	.164	-.290	.100	.131	-.082	.145
41	-.061	-.363	.447	.024	-.047	.337
42	.155	-.503	.275	.256	.023	.419
43	.316	-.300	-.042	.448	-.010	.392
44	-.022	-.294	.243	.530	-.063	.430
45	.317	-.391	.139	.376	.040	.416
46	.434	-.336	-.179	.126	-.040	.351
47	.555	-.301	-.445	.074	-.043	.604
48	-.055	-.336	.385	.400	-.121	.440
49	.378	-.365	-.282	.169	-.117	.398
50	.385	-.474	-.231	.240	-.219	.532
51	-.031	-.249	.143	.515	-.210	.393
52	.086	-.281	.064	.491	-.014	.332
53	.355	-.598	-.103	-.038	-.204	.537
54	-.067	-.368	.243	.348	-.536	.607
55	.154	-.474	.110	.309	-.082	.363
56	-.045	-.375	.256	.367	-.453	.548
57	.270	-.247	.115	.353	-.130	.289
58	.171	-.443	-.007	.327	-.470	.554
59	.041	-.098	.170	.658	-.196	.511
60	.348	-.626	-.027	.092	-.235	.577
61	.367	-.523	-.101	.097	-.023	.428
62	.117	-.407	.325	.315	.106	.396
63	.185	-.508	.252	.144	.057	.380
64	.261	-.326	.001	.509	-.002	.434
65	-.059	-.334	.405	.227	-.000	.331
66	.280	-.502	.089	.170	-.060	.367
67	.155	-.302	.141	.550	-.036	.439
68	.340	-.652	.000	.072	-.209	.591
69	.111	-.410	.233	.176	-.031	.267
70	.281	-.567	.078	.088	-.188	.450

TABLE III

POSITIVE EIGENVALUES

Number	Eigenvalue	Percent of Communality 12 Factors		5 Rotated Factors	
1	17.198	24.6	24.6	61.0	61.0
2	4.501	6.4	31.0	16.0	77.0
3	2.792	4.0	35.0	9.9	86.9
4	1.944	2.8	37.8	6.9	93.8
5	1.747	2.5	40.3	6.2	100.0
6	1.481	2.1	42.4		
7	1.417	2.0	44.4		
8	1.387	2.0	46.4		
9	1.220	1.7	48.1		
10	1.172	1.7	49.8		
11	1.195	1.7	51.5		
12	1.059	1.5	53.0		

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TABLE IV

ITEMS IN EACH FACTOR AND ASSOCIATED FACTOR LOADINGS

Working Conditions		Administration		Fringe Benefits		Social Relations		Decision Making	
19	(.682)	40	(-.290)	12	(.615)	59	(.658)	5	(.190)
13	(.631)	37	(-.355)	14	(.590)	67	(.550)	44	(-.318)
24	(.610)	38	(-.391)	8	(.476)	2	(.532)	25	(-.356)
9	(.595)	45	(-.391)	18	(.475)	44	(.530)	56	(-.453)
21	(.593)	36	(-.405)	41	(.447)	51	(.515)	58	(-.470)
27	(.573)	62	(-.407)	33	(.427)	64	(.509)	54	(-.536)
30	(.561)	69	(-.410)	65	(.405)	26	(.499)	15	(-.594)
47	(.555)	50	(-.474)	11	(.389)	52	(.491)	17	(-.641)
29	(.551)	55	(-.474)	3	(.364)	43	(.448)	23	(-.662)
32	(.542)	39	(-.493)	31	(.310)	48	(.400)		
10	(.536)	66	(-.502)			57	(.353)		
22	(.535)	42	(-.503)						
28	(.532)	63	(-.508)						
16	(.529)	61	(-.523)						
6	(.529)	70	(-.567)						
20	(.518)	53	(-.598)						
7	(.462)	60	(-.626)						
34	(.452)	68	(-.652)						
46	(.434)								
49	(.378)								
35	(.377)								
1	(.375)								

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